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# RACINE TIRES



WE ARE FACTORY  
DISTRIBUTORS



# Manufacturers Supplies Co.

S. W. Cor. Cherry and Juniper Sts.

Philadelphia, Penna.

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Everything for the Automobile, Bicycle, Motorcycle and Sewing  
Machine Dealer

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MANUFACTURERS AND DISTRIBUTORS OF AUTOMOTIVE SUPPLIES,  
BICYCLES; MOTORCYCLE, BICYCLE AND SEWING MACHINE SUP-  
PLIES; ALSO A COMPLETE LINE OF TOOLS AND SHOP EQUIPMENT.

If interested in these lines  
write for Catalog and Price List

# TO THE TRADE

We are pleased to offer this as our latest catalogue, illustrating the most popular and best-known articles on the market. It is, however, almost impossible to supply a catalogue which will, at all times, be up to date with our stock, on account of the continued increase in the variety of new goods added to our stock from time to time.

While we do not claim or strive to supply every brand of Automobile Supplies, regardless of merit, yet we do aim to carry the most complete stock of strictly reliable high-class goods procurable in this line and we have endeavored to maintain our established reputation in the following pages, which we respectfully submit for your careful consideration.

**SERVICE.** We catalog only good, live-selling goods of the best quality and the latest novelties. These are shown in varied styles and grades to suit the respective tastes of a critical public. This, together with our ability to give the smallest orders as careful attention and care as the largest stock orders, we are convinced will merit your valued business and patronage.

**PRICES.** A thorough study of prices and a careful comparison of quality will convince you, as a careful buyer, that, on the complete line, we can save you time, trouble and money.

**TERMS CASH.** We allow a liberal discount to all dealers 30 days from date of invoice. Accounts will be opened with dealers who have an established commercial standing, or who are sufficiently well rated, in books of commercial reference. We shall be pleased to receive references from prospective customers not rated, owing to being newly established. C. O. D.—Shipments will not be made C. O. D. where parties are unknown to us without a deposit as guarantee of transportation charges.

**MAIL ORDERS.** After having had many years of experience in handling mail orders, we know we can give you prompt service. Our stock rooms embody all the latest time and labor-saving devices and facilities, and are in charge of men of ability and experience.

**SHIPMENT.** Unless specific instructions are given our own judgment will be used as to the best manner in making shipments to our customers, and it is our policy at all times to ship by the least expensive and yet the most reliable transportation.

**DELIVERY.** Our responsibility for safe delivery ceases when goods are delivered in good order to the Transportation Companies. However, we are always ready to assist our customers in every possible way in filing claims and tracing shipments. Goods ordered shipped by mail are sent at customer's risk.

**RETURNED GOODS.** Do not return goods for ANY REASON without first obtaining instructions, as we can generally place them with other customers in your vicinity. When returning goods for repairs, credit or exchange mark package plainly with your name and address. No goods should be returned without our shipping directions, for if it is a claim as to the quality, workmanship or material, it is our custom to order shipped direct to the factory making the guarantee, thereby saving extra delay and transportation charges.

**CLAIMS.** All claims for shortage or error must be made within 10 days from date of invoice.

**PRICES.** The prices in this Catalog are subject to the fluctuations of the market and are liable to alteration, without notice.

## Manufacturers' Supplies Company

Cherry and Juniper Streets,     ::     ::     PHILADELPHIA, PA.



## E AND J ELECTRIC LAMPS.

The Highest Grade Product at the Lowest Possible Cost.

Each lamp is inspected, tested and adjusted before being wrapped in a special non-tar-nishing tissue paper, sealed and packed in a separate carton, insuring our patrons of receiving goods in perfect condition.



Electric Headlight.

Made especially for high priced cars which require a neat, compact, close coupled lamp with high efficiency. One piece body. Hexagon door. Heavy silver plated parabolic reflector fitted flush to body. Patented focal adjustment to equalize any bulb variation. Dust and waterproof. Patented locking device on door. Electric connector. No. 14 waterproof cable. 6 volt, 18 c. p. Tungsten bulb, G-16½ size.

Model No.	956
Prop centers standard	inch 7¼
Diameter, front	10
Extreme depth	5¾
Size glass	8¾
Prop hole	½
Pair	\$10.00

Standard finish, Black and Nickel.

NOTE: When ordering be sure and specify whether Single or Double Contact.



Electric Headlight.

Made especially for low priced cars which require a neat, compact, close coupled lamp with high efficiency at a low price. One piece body. Hexagon door. Heavy silver plated parabolic reflector fastened in the body. Patented focal adjustment to equalize any bulb variation. Dust and waterproof. Patented locking device on door. Electric connector. No. 14 waterproof cable. 6 volt, 15 c. p. Tungsten bulb, G-16½ size.

Model No.	1366
Prop centers standard	inch 7¼
Diameter, front	10
Extreme depth	5¾
Diameter glass	8¾
Prop hole	½
All Black finish, each	8.00

NOTE: When ordering be sure and specify whether Single or Double Contact.



Electric Side Light.

We present above a neat design to meet all requirements. It is small and compact. Producing a good driving light. Full French roll door, heavy silver plated parabolic reflector fitted flush to the glass. Dust and waterproof. Fitted with 6 v., 4 c. p. Mazda bulb, G-8 size.

Model No.	346
Diameter, front	5¼
Extreme depth	4½
Size glass	3¾
Pair	\$4.00

Standard finish, Black.



No. 25 Electric Tail Light.

Complying with all state laws and city ordinances. 6 volt, 2 c. p.

Mazda bulb. G-6 size.

Extreme height, 3¼ in.

Extreme depth, 3 in.

Diameter of front glass, 3 in.

Finish, all black.

Each \$2.00

NOTE: When ordering be careful to specify whether Single or Double Contact for any of the above lamps.



No. 25 Electric Tail Light With License Holder.

Complying with all State, laws and city ordinances. Compact, neat and very effective. Extra size semaphore ruby lens. The window on the bottom throws sufficient light to illuminate the number—Equipment with special cut-out plug or switch, conforming with certain State laws. Combination prop for round or flat bracket. Special electric connector and socket, 6 volt, 2 c. p. Mazda bulb, G-6 size.

With License Holder in.

Diam., front	3¾
Diam., ruby glass	3
Extreme depth	3
Prop hole	½
Each	\$2.50

Standard finish, Black Enamel.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## LAMPS



GAS HEAD LAMP

A high-grade Gas Lamp, suitable for use on high-grade cars and so reasonable in price that it is not too expensive for the cheaper cars. Body drawn in one piece from heavy gauge steel, all parts solidly riveted. Finished with three coats of enamel thoroughly baked on. Equipped only with genuine Mangin Mirrors, ground and polished. Front diameter, 9 inches; distance between props, 7 inches.

Made with highly polished front reflector.

Finish, all black, pair .....\$7.00

### Square Oil Side Lamp.

Square type Oil Lamp, having highly polished lining. Made from heavy gauge stock, combination prop, for either flat or round bracket. Oil fount fastened securely with our patented device. Warranted to stay lighted under all conditions. Extreme height, 10 $\frac{3}{4}$  inches; size of body, 4 x 4 inches.

This lamp is especially suitable for taxicabs.

Finish, all black, pair .....\$6.00



SQUARE SIDE

### Square Oil Tail Lamp.

Square type Oil Lamp, same identical construction as the side lamp and designed especially for use with that model. Extreme height 10 $\frac{3}{4}$  inches; size of body, 4 x 4 inches; semaphore ruby glass, 3 inch diameter. Warranted to stay lighted under all conditions.

Finish, all black, each .....\$3.50



SQUARE TAIL

### Round Type Oil Side Lamp.

Body drawn in one piece from heavy gauge steel, all parts securely fastened, no solder whatever used, making a very substantial lamp. Especially suitable for light cars and cycle cars. Extreme height 9 $\frac{1}{4}$  inches; diameter of door, 4 inches; crystal semaphore, 3 inch diameter in door.

Finish, all black, pair .....\$4.00



ROUND SIDE

### Round Type Oil Tail Lamp.

Same identical construction as the side lamp and designed especially for use with that model. Extreme height, 9 $\frac{1}{4}$  inches; diameter of door, 4 inches; diameter of ruby semaphore lens, 3 inches.

Finish, all black, each .....\$2.25



ROUND TAIL

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## SEARCHLIGHTS

Side View  
**OLD SOL  
SPOTLIGHT  
No. 77**



Old Sol Spotlight No. 77 has 6-inch door—is a great favorite among drivers of all cars. Finely finished black enameled body. Has focusing device, an exclusive patented feature, operated by on and off switch in handle. Universal bracket is adjustable to all straight or tapering windshield uprights. Special bracket on request for Studebaker. Highly polished, genuine silvered reflector. Has 3-inch diminishing mirrorscope attached to lamp which can be adjusted to any angle. Five feet of finely braided duplex cable with electrical copper terminals. 24 C. P. Nitrogen bulb, 6-8 voltage.

Complete, each .....\$6.50

A larger model is the No. 70, and is universally popular with motorists. A very powerful searchlight. Has 7-inch door. 4-inch adjustable diminishing mirror and five feet of duplex cable with copper terminals. Special bracket for Studebaker.

Complete, each .....\$8.00

Side View  
**OLD SOL  
SPOTLIGHT  
No. 70**



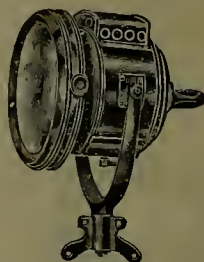
Front View  
**OLD SOL  
NITROJECTOR  
No. 100**



Something new in the way of spotlights. It is Old Sol's latest creation and is truly a wonderful light. The shutter does the trick. The pilot light is invisible to the eye. Every part of it is adjustable to suit the owner's wants. The only spotlight with double light control and no-glare device; large 8 inch body, 5 feet duplex cable, 4 inch adjustable diminishing mirrorscope.

Each .....\$10.00

## GAS SEARCHLIGHT



**Diamond Door.**

This searchlight is made of heavy gauge steel with malleable fork brackets, which allows vertical and lateral movements, equipped with a French mirror. Same lamp furnished with a marine or deck base for use on motor boats. Finish all black.

76--8 inch front. 6 inch barrel. Price, each.....\$11.00

77--9 inch front. 7 inch barrel. Price, each..... 12.00

## STEWART V-RAY SEARCHLIGHT



Price, each .....\$6.00

Something different in the way of searchlights. Suspended from a bracket that is instantly adjustable to any position, it adds greatly to the appearance of any car.

The bracket is so arranged that it can be adjusted up or down or turned to any position instantly. Furnished complete with plated reflector.  $\frac{3}{4}$  inch reducing mirror in back. Equipped with universal bracket which fits all makes of cars and five feet double strand electric cord.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## INSPECTION LAMPS



Type "PS" Dash Lamp.

This lamp is the neatest dash lamp yet offered, and has the feature of a switch incorporated in it so that the necessity of extra controlling switch and involved wiring is obviated.

Type PS, without bulb .....\$0.75



Type "RW" Trouble Lamp.

Made up in a substantial and neat manner with solid brass reflector heavily nickeled and highly polished, with protecting wire guard so arranged that it can be collapsed for the removal or insertion of a lamp, fitted with rubberoid handle and ten feet black rubber covered duplex cord with Ediswan attachment plug.

Each lamp packed without bulb in tubular case with screw cover.

Type RW (with plug for two wire socket) \$1.50

Type SW (with plug for one wire socket) 1.50



502.

502 is designed to supply the requirements of an inexpensive practical lamp, well made and finished, equipped with a 6-volt 2-candle power Tungsten lamp. Ten feet of flexible cord, plug and cap for attaching.

502 Wire Guard 2 c. p. lamp .....\$1.25



Garage Lamp.

Heavy Garage Lamp, complete with 10 feet of reinforced cord and heavy coppered guard ready to attach to street current of 110 volts. Furnished with 16 c. p. lamp and plug.

Complete, each .....\$3.50



Type "TD" Combined Dash and Trouble Lamp.

This is primarily a dash lamp which can, however, be removed from dash socket and be used as a trouble lamp by means of an extension cord. This cord is ten feet long and is fitted with proper fittings for attachment to lamp and socket. By revolving the lamp, it may be turned off and on.

NOTE collar and side spring tension to prevent rattling. Length from dash to center of bulb 11-16 inch.

Type TD Dash Lamp without bulb.....\$1.00

Including Extension Cord, with attachment plug and socket ..... 1.75



Type "RG" Trouble Lamp.

Made up with solid brass reflector heavily nickeled and highly polished and a high grade lens, rubberoid handle and ten feet of black rubber covered duplex cord with an outer braid and filler, fitted with plug and lamp. It is without doubt the highest grade trouble lamp on the market.

Each lamp packed in tubular case with screw cover for retail trade, without bulb. 6 volt 4 CP bulb.

Type RG (with plug for two wire socket) \$2.40

Type SG (with plug for one wire socket) 2.40

## Tonneau Bow Light



This lamp is so constructed that when it is mounted on top of bow of the tonneau it can be instantly removed to prevent breakage when top is folded. All metal parts highly polished nickel. Four points on metallic cap control current, revolving cylinder turns light on or off. It is impossible for the lamp to fall, guaranteed not to rattle. New bulb easily inserted. Size of lamp, 1 1/4 inches dia., 3 1/2 inches long.

Each .....\$3.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## EVEREADY FLASHLIGHTS



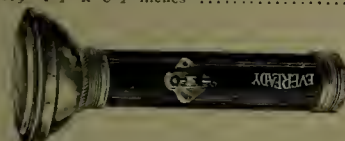
## Regular Flash—Vulcanized Fibre

No. 2602	1 1/4	x 5	inches	.....\$1.10
No. 2604	1 1/2	x 6 1/2	inches	.....1.35
No. 2612	1 1/2	x 8 1/2	inches	.....1.50



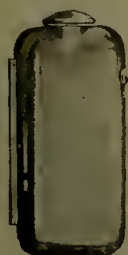
## Miners Flash—Vulcanized Fibre

No. 2616	1 1/2	x 6 1/2	inches	.....\$1.70
No. 2619	1 1/2	x 8 1/2	inches	.....1.90

Portable Searchlight—  
Vulcanized Fibre

Strong, powerful and lasting, these searchlights are built especially for all who need a portable light of great penetrative power.

No. 2659	1 1/2	x 8 1/2	inches	.....\$3.65
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## Vest Pocket—Nickel Plated

No. 6991	Side opening,	3/4	x 1 3/4	x 3	inches	.....\$1.00
No. 6961	Bottom opening,	3/4	x 1 3/4	x 3	inches	......75
Renewal Tungsten Battery	No. 750	.....	.40			
Renewal Mazda Bulb	No. 1180	.....	.20			
No. 6992	Side opening,	3/4	x 2 1/4	x 3	inches	.....1.30
No. 6962	Bottom opening,	3/4	x 2 1/4	x 3	inches	.....1.00
Renewal Tungsten Battery	No. 751	.....	.45			
Renewal Mazda Bulb	No. 1181	.....	.20			

Electric House Lamp—  
Nickel Plated

No. 4706—4 x 2¾ x 2½ inches .....	\$2.55
No. 4707—4¾ x 4½ x 3½ inches .....	4.35
Renewal Tungsten Bat- tery No. 703 .....	.45
Renewal Mazda Bulb No. 1199 .....	.20



## Regular Flash—Nickel Plated

No. 2630	1 1/4	x 5	inches	.....\$1.30
No. 2631	1 1/4	x 6 1/2	inches	.....1.60
No. 2632	1 1/2	x 8 1/2	inches	.....1.90



## Miners Flash—Nickel Plated

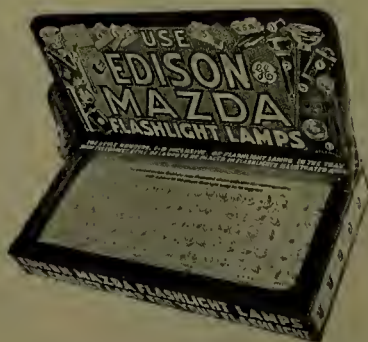
No. 2634	1 1/2	x 6 1/2	inches	.....\$2.35
No. 2633	1 1/2	x 8 1/2	inches	.....2.65

## Renewal Tungsten Batteries

For 5	inch	Flashlights,	No. 791	.....\$0.40
For 6 1/2	inch	Flashlights,	No. 790	......40
For 8 1/2	inch	Flashlights,	No. 705	......60

## Renewal Mazda Bulbs

For 5	inch	Flashlights,	No. 1182	.....\$0.20
For 6 1/2	inch	Flashlights,	No. 1198	......20
For 8 1/2	inch	Flashlights,	No. 1193	......20



## Flashlight Bulb Assortment

Flashlights are no longer considered toys or playthings, but have established themselves, in all classes of service where safe, reliable portable, handy light is required. Lamp renewals are necessary.

The Edison MAZDA Flashlight Assortment contains one hundred (100) assorted Edison MAZDA flashlight lamps, compactly arranged in an attractive colored display container. From it you can supply lamp renewals for every standard brand of flashlight and hand lantern. Assortment complete .....\$20.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# LEGALITE LENS

## DAYLIGHT CONDITIONS FOR NIGHT DRIVING!

Here, at last, is a wonderful new headlight lens, the greatest advance in automobile lighting equipment since gas and electricity superseded oil. More light—

Positively *no glare* — light beams never



more than 42 inches above the ground—at any distance from car—you get the light where you want it.

### PRICES

### Per Pair

6½ .....	\$2.00
7 to 7¼ .....	2.20
7¾ to 8½ .....	3.00
8¾ to 9½ .....	3.75
9¾ to 11¼ .....	4.50

Endorsed by States and Cities the country over. Endorsed by Safety First League of America. Conforms to *every* headlight law *everywhere!*

Legalite is the *only* one that gives *more* light and at the same time cuts out *all glare!*

Write for the Legalite Booklet or *send in your order now* for a *sample pair* of Legalite Lenses!



Does everything a *dimmer* does except cut off light—

Does everything your present lens does, plus more light—and *no glare*.

Throws a searching light 250 to 500 feet ahead—*on the ground*—even when going *up or down hill!*

# WARNER-LENZ



Bring the final solution of night-driving problems to all who motor. At last here is a lens that gives a *perfect* driving light for both country and city.

Do away with the blinding—dazzling—dangerous *unlawful* beam of light.

Give a safe, sane and pleasurable light for city driving.

Give an extremely better light for country driving.

Do away with the glare—but is not a dimmer.

Give man-made daylight—lighting both sides of the road, as well as far ahead.

Warner-Lenz break up the light and diffuse it. It is thrown far enough ahead—from 300 to 500 feet. And spreads out like a fan. Dangers are disclosed before you reach them. In turning corners the entire way is lighted up completely while you are turning.

Diameter in inches	Per pair
5 to 9, inclusive	\$3.50
9 to 10, inclusive	4.00
10 to 12, inclusive	5.00

**Caution—**In ordering Lenz of any make it is necessary to give name, year and model of car.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## EDISWAN SOCKETS AND CONNECTORS

## FOR SINGLE OR DOUBLE WIRING

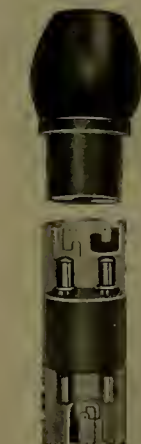
Made from 18 gauge brass tubing, brass inserts of large diameter. Music wire springs plated to prevent rust, best quality of rod rubber.

All metal parts finished in nickel.

Connectors supplied with "On and Off" slots, if so desired.



284

213 Twin Wire  
261 Single201 Twin Wire  
250 Single Wire202 Twin Wire  
251 Single Wire204 Twin Wire  
252 Single Wire205 Twin Wire  
254 Single Wire207 Twin Wire  
256 Single Wire208 Twin Wire  
257 Single Wire101 Twin Wire  
151 Single Wire102 Twin Wire  
152 Single Wire103 Twin Wire  
153 Single Wire

Single Twin  
Wire Wire  
Nos. Nos.

			Each
	284	Cap, hard rubber .....	\$ .06
261	213	Plug end, with shoulder, threaded for cap .....	.20
250	201	Plain Connector .....	.35
251	202	Plain Connector, with cap .....	.35
253	204	Wood Dash Connector .....	.45
254	205	Wood Dash Connector, with cap .....	.50
256	207	Metal Dash Connector .....	.60
257	208	Metal Dash Connector, with cap .....	.75
151	101	Plain Socket, 1½ inch by 687½ diameter .....	.35
152	102	Plain Socket, 1½ inch by 687½ diameter with cap .....	.40
153	103	Plain Socket, 1¾ inch by 687½ diameter .....	.40

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## EDISWAN SOCKETS AND CONNECTORS



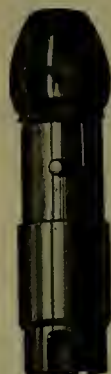
111 Twin Wire  
161 Single Wire



120 Twin Wire  
169 Single Wire



112 Twin Wire  
162 Single Wire



121 Twin Wire  
170 Single Wire

Nos. Nos.  
Wire Wire  
Single Twin

169	120	Plain Socket,	1 3/8 inch by 687 1/2 diameter screw connection.....	\$0.25	Each
161	111	Plain Socket,	1 1/4 inch by 687 1/2 diameter screw connection.....	.20	
162	112	Plain Socket,	1 1/4 inch by 687 1/2 diameter cap and screw connection..	.30	
170	121	Removable Socket,	2 inch by 775 diameter screw sleeve .....	.65	

All metal parts finished in nickel. Sockets furnished with "on" and "off" slots if so specified.

## Lamp Converter No. 17



No. 17. Lamp Converter is designed to be used in both side and oil tail lamps, thereby permitting the choice of either kind of illumination. No soldering is necessary. Simply cut hole in base or side of lamp and fasten with lock nuts.

For Ediswan Base Bulb.

No. 17. Price, each as per illustration.....\$0.60

No. 17. Price, with plain plug (not capped)..... .50



## ANGLE CONNECTOR

A7	Twin Wire without cap .....	\$0.55
B7	Single Wire without cap .....	.55
A8	Twin Wire with cap .....	.60
B8	Single Wire with cap .....	.60

## Electric Light Bulb Case



Made of extra heavy steel, without a seam. It will carry extra bulbs safer than the ones in the lamps of the car.

For Ediswan Base: Capacity, 2 head-lights; 2 sidelights; Tail and Speedometer lights.

Bulbs are securely held in place by brass springs and a new locking device. Simply insert the base of the lamp in the slotted hole, pressing down on brass spring, and turn one half, either right or left, until the pins of the lamp lock in the grooves. They cannot work loose and are held perfectly rigid, although they are put in or removed instantly.

Length 5 3/4 in. Width 3 3/4 in. Depth 3 3/4 in.

Price, each .....

## GAS BURNERS



Crescent Victory  
German Stone  
1/2, 3/8, 1/4 and 1  
foot sizes.  
Price, each ...\$0.25



Standard American  
Is a leader among  
burners at this price.  
Made in 1/2, 3/4 and 1  
foot sizes.  
Price, each ...\$0.15

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# EDISON MAZDA LAMPS FOR AUTOMOBILE SERVICE

(ALL LAMPS 1/2 SCALE)



G-6

Rear and speedometer  
lights, two in series. 3  
cell (3.4 volts)

MAZDA 62



G-6

Rear and speedometer  
light. 3 cell (6.8 volts)

MAZDA 63



G-8

Side light.  
3 cell (6.8 volts)

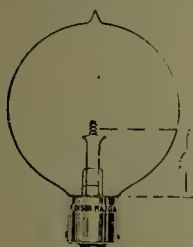
MAZDA 81



G-12

Mazda B Headlight and  
spotlight. 3 cell (6.8  
volts)

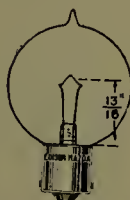
MAZDA 125



G-16 1/2

Mazda B Headlight and  
spotlight. 3 cell (6.8  
volts)

MAZDA 165 and 169



G-12

Mazda C Headlight and  
spotlight. 3 cell (6.8  
volts)

MAZDA 129 and 133



G-6

Rear and speedometer  
light  
6 cell (12-16 volts)

MAZDA 67



G-8

Side light.  
6 cell (12-16 volts)

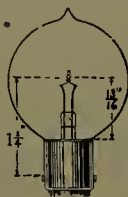
MAZDA 89



G-12

Mazda B and Mazda C.  
Headlight and spotlight.  
6 cell (12-16 volts)

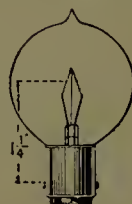
MAZDA 139 and 141



G-12

Mazda B Headlight for  
Ford cars

MAZDA 136



G-12

Mazda C Headlight  
for Ford cars

MAZDA 138

## SMALL BASES

(SHOWN FULL SCALES)



STYLE NO. 1000  
Bayonet Candelabra Base  
(Double Contact)



STYLE NO. 1100  
Bayonet Candelabra Base  
(Single Contact)

**EDISON MAZDA AUTOMOBILE LAMPS**

**FITTED WITH EITHER BAYONET CANDELABRA SINGLE OR DOUBLE CONTACT BASES  
STYLE 1100 OR 1000**

**FOR AUTOMOBILE SERVICE**

**LAMPS FOR 3 CELL (LEAD TYPE) STORAGE BATTERY—GENERATOR LIGHTING  
SYSTEMS (6-8 VOLTS)**

Mazda Number		Description	Volts	Amps.	Approx. Candle Power	Type and Size Bulb	Unit Package Quan- tity	List Price Each
Single Con- tact Base	Double Con- tact Base							
Mazda 61	Mazda 62	Rear and Speedometer (Two in Series).....	3-4	0.84	2	G- 6	10	.25
Mazda 63	Mazda 64	Rear and Speedometer.....	6-8	0.42	2	G- 6	10	.27
Mazda 81	Mazda 82	Side.....	6-8	0.84	5	G- 8	10	.30
Mazda 125	Mazda 126	Mazda B Headlight.....	6-8	2½	17	G-12	5	.40
Mazda 165	Mazda 166	Mazda B Headlight.....	6-8	2½	17	G-16½	5	.40
Mazda 169	Mazda 170	Mazda B Headlight.....	6-8	3½	24	G-16½	5	.45
Mazda 129	Mazda 130	Mazda C Headlight.....	6-8	2½	20	G-12	5	.42
Mazda 133	Mazda 134	Mazda C Headlight.....	6-8	4	32	G-12	5	.80

**LAMPS FOR 6 CELL (LEAD TYPE) STORAGE BATTERY—GENERATOR LIGHTING  
SYSTEMS (12-16 VOLTS)**

Mazda 63	Mazda 64	Rear and Speedometer (Two in Series).....	6-8	0.42	2	G- 6	10	.27
Mazda 67	Mazda 68	Rear and Speedometer.....	12-16	0.26	3	G- 6	10	.30
Mazda 89	Mazda 90	Side.....	12-16	0.42	6	G- 8	10	.35
Mazda 175	Mazda 176	Mazda B Headlight.....	12-16	1	16	G-16½	5	.43
Mazda 139	Mazda 140	Mazda C Headlight.....	12-16	1	13	G-12	5	.43
Mazda 141	Mazda 142	Mazda C Headlight.....	12-16	1½	30	G-12	5	.45

**LAMPS FOR FORD MAGNETO LIGHTING SYSTEM**

Lamps to be burned Two in Series Fitted with Double Contact (D.C.) Bayonet Candelabra Base

	Mazda 136	Mazda B Headlight (Two in series).....	9	2	21	G-12	5	.40
	Mazda 174	Mazda B Headlight (Two in series).....	9	2	27	G-16½	5	.40
	Mazda 138	Mazda C Headlight (Two in series).....	9	2	27	G-12	5	.42

Order in unit quantity packages in order to facilitate prompt deliveries.

Order lamps by MAZDA numbers.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## EDISON MAZDA AUTOMOBILE LAMP ASSORTMENTS



## "Presto" Electric Cigar Lighter



No. 205 Lighter.

The cigar lighter case is made of polished wood, ebony finish. A nickel plated holder is furnished with each lighter. It is equipped with ten feet of silk cord, which can easily be attached anywhere in your car, and is furnished with a tip to suit voltage on car.

These tips are made of chromium metal drawn filament which heats up instantly.

Price:	Complete	Extra Tip
6-7-8 volt .....	\$2.50	\$1.00
12 volt .....	2.75	1.50
18 volt .....	3.00	2.00
24 volt .....	3.25	2.50



No. 240 Winder.

This most useful article is in great demand. It winds up the cord automatically and effectively, takes care of the cord on the cigar lighters and inspection lamps, and can be used in connection with any of our "Presto" Cigar Lighters and Inspection Lamps. It can be fastened wherever it would be most convenient for the parties wishing to use the cigar lighter.

No. 240. "Presto" Automatic Cord Winder (only), black rubber finish.....\$2.50


No. 1. Assortment contains 100 popular type lamps and is complete stock in itself, as follows: 25 headlight lamps, 15 Ford headlight lamps, 20 side light lamps and 40 tail and dash lamps.

Asst. No. 1 .....\$33.35


No. 2 Assortment is not a complete stock, but is supplementary to No. 1, and contains 100 lamp assortment as follows: 50 headlight lamps, 30 Ford headlight lamps, 20 tail and dash lamps.

No. 2 Asst. ....\$40.55

## AUTOMOBILE FUSES

**TYPE 1A**   $\frac{5}{8}$ " x  $\frac{1}{4}$ "  
Glass Fuse 1-50 VOLTS  
Carried in 20 amperes.

Price, each .....\$0.05

**TYPE 3A**   $1\frac{1}{4}$ " x  $\frac{1}{4}$ "  
Glass Fuse 1-50 VOLTS  
Carried in 15 and 20 amperes.

Price, each .....\$0.05

**TYPE 4A**   $1\frac{1}{4}$ " x  $\frac{1}{4}$ "  
Fibre Fuse 1-50 VOLTS  
Carried in 5, 10 and 15 amperes.

Price, each .....\$0.20

**TYPE 5A**   $1\frac{1}{2}$ " x  $\frac{3}{8}$ "  
Fibre Fuse 1-250 VOLTS  
Carried in 5, 10, 15, 20 and 30 amperes.

Price, each .....\$0.20

**TYPE 6A**   $2$ " x  $\frac{1}{2}$ "  
Fibre Fuse 1-250 VOLTS  
Carried in 10, 15, 20 and 30 amperes.

Price, each .....\$0.25

In ordering be sure to give full particulars as to type, size, voltage and amperage of fuse desired. The name, model and year of the car is also essential in order to insure getting the correct fuse. Amperages mentioned below are carried in stock. Any amperage can be furnished special.

## FUSE ASSORTMENT

Contains the following types and quantities of automobile fuses:



20	20 amp.	Type 1-A	Fuses
6	15 amp.	Type 2-A	Fuses
10	10 amp.	Type 3-A	Fuses
10	20 amp.	Type 3-A	Fuses
10	15 amp.	Type 4-A	Fuses
6	5 amp.	Type 5-A	Fuses
3	10 amp.	Type 5-A	Fuses
10	15 amp.	Type 5-A	Fuses
6	30 amp.	Type 5-AG	Fuses
6	15 amp.	Type 6-A	Fuses
6	20 amp.	Type 6-A	Fuses
4	Fuse Links to fit Buick car		

Assortment, each .....\$13.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## REINFORCED LAMP CORD



This cable is extra heavily insulated and is suitable for drop or extension cords in garages and shops or for any use where subjected to hard usage.

No. 18. NC. Price, per foot.....\$0.15

## ELECTRIC LAMP CORD



Green and Yellow Twisted Cotton Covered Lamp Cord  
No. 16. Grade A. Per foot.....\$0.10

## GREEN SILK COVERED LAMP CORD

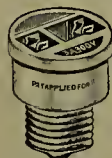
No. 20. Per foot .....\$0.15

## BREWERY CORD

A black twisted cotton covered lamp cord, saturated with a weather-proof compound, waxed and polished.

No. 18. Price, per foot .....\$0.10

## ATTACHMENT PLUG



No. 16410

Porcelain, each ....\$0.60

Composition, each... .65

## BENJAMIN ATTACHMENT PLUG



No. 903

Price, each.....\$0.60

## RUBBER LAMP TUBING



The finest quality red rubber tubing, guaranteed to stand 35 to 50 pounds pressure, which is many times in excess of the pressure ever served to an automobile lamp.

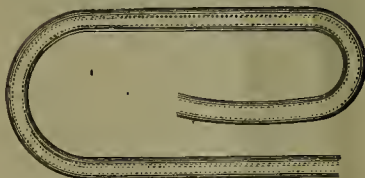
	Per ft.
3-16x1-16 in. wall.....	\$0.06
¼x1-16 in. wall.....	.09
3-16x¾ in. wall.....	.15

## KEY SOCKETS



No. 59480. ⅝ in. cap, each.....\$0.60

## SEAMLESS COPPER TUBING



Our tubing is full size and flexible and will bend without kinking.

	Gauge.	No. of ft. to lb.	Per lb.
20	1/8 in. O. D.	25	\$1.75
3-16	3/16 in. O. D.	15	1.50
¼	1/4 in. O. D.	11	1.30
5-16	5/16 in. O. D.	9	1.25
¾	3/4 in. O. D.	7	1.15

The number of feet to the lb. is estimated as nearly correct as possible.

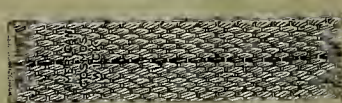
## STEEL CLIPS



For fastening generator tubing to car. Just right to go over tubing and hold in place.

No. 5. For tubing ¼ in. O. D.....\$0.25  
No. 6. For tubing 5-16 in. O. D......25

## LAMP WICKS



These are the finest wicks for use in oil lamps. Are very closely woven. ⅝x7 in. or ¾x7 in. long.

Price, per dozen.....\$0.15

## Blake Staples



For Twisted Pair and Single Wires

	Per box of 100
No. 1. ½ inch long .....	\$0.45
No. 3. ¾ inch long .....	.45
For Twisted 3 Wire and Heavy Pair Wire	
No. 5. ¾ inch long .....	\$0.50
No. 7. 7/8 inches .....	.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# Pyrene



## The Fire Extinguisher for Motor Cars and Garages

Do not attempt to put out an automobile fire with water, sand or a dry powder fire extinguisher. These extinguishing elements are ineffective except on the smallest, most accessible fires, and even in these cases the resulting damage is often very great to the engine, upholstery and varnished surfaces of your car.

Every motor car and garage should be protected by Pyrene Fire Extinguishers. A few shots of Pyrene, even if directed through the radiator, will put out the most stubborn fire—so quickly that it will surprise you.

Pyrene Liquid is a chemical combination of purely organic materials, having an aromatic odor and a high specific gravity.

As it touches the fire or even the heated parts of the motor Pyrene Liquid is converted into a dense white gas blanket which surrounds the fire and smothers it instantly.

Pyrene is non-damaging and non-corrosive.

Pyrene is the only effective extinguisher of fires in highly inflammable material—particularly oil or gasoline.

Pyrene does not freeze at sixty degrees F. below zero, and is good until used, because it does not deteriorate. Neither does it evaporate, being enclosed in a sealed cylinder.

The Pyrene extinguisher is easily operated and may be re-filled as readily as a kerosene lamp. It is handsomely finished and may be carried in our special holder on the dashboard or any convenient point of your car.

Pyrene extinguisher, brass, with black bracket, each .....	\$10.00
Pyrene extinguisher, nickel plated, with black bracket, each .....	11.00
Pyrene liquid refills, quart cans, each .....	1.50
Pyrene black enameled brackets, only, each .....	1.00

## Veeder

### HUB ODOMETER

Records truck mileage; indicates cost-per-mile of fuel, oil, tires, repairs, etc.; reports wasteful or careless operation; tells the work done by drivers; shows the shortest routing for deliveries. Keeps the truck owner informed of every opportunity to economize and buy mileage at the lowest possible figure.



Whatever it costs the truck owner to operate a truck, it will cost him *less* with a VEEDER Hub Odometer, because with the VEEDER he can carry out methods of truck management which show a saving, and cut out those which show a waste. By *watching* his per-mile costs, he can keep them down to a minimum.

## The Works Take The Wear

The VEEDER gives continuous cost-records because it's built for continuous knock and shock—one look at the mechanism proves that. Here is structural strength in keeping with that of a good truck. The VEEDER seals on to front hub and always registers *forward*, whether truck runs forward or backward. When ordering, state the make, model, year of manufacture of car and size of front wheel.

Price, (regular model) each .....

\$20.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# PRICE-LIST OF EQUIPMENT PARTS

## STEWART LUBRICANT [1997]



## DRIVE PINIONS



Cotter Pin Type can be used on any Swivel Joint except 1911 Type

## SWIVEL JOINT



[No. 1913 right hand]  
[No. 1959 left hand]

## FLEXIBLE SHAFT HANGER 7208



## STEERING KNUCKLE CLAMP PARTS



[4015]



[4017]

[4025]



[512]

## ROAD WHEEL GEARS



Cut-Out Type



Plain Type



[4003]



[4032]



[4014]



[4007]

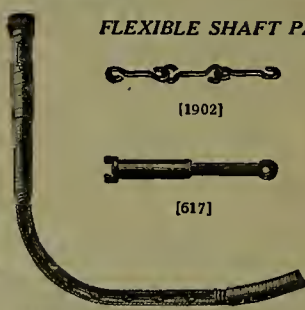
## FLEXIBLE SHAFT PARTS



[1902]



[617]



[1799]

Stewart Flexible Shaft

## RUBBER BUSHING



[1996]



[1880]

## GREASE CUP CAPS

A grease cup is an integral part of all swivel joints made since 1911. Three types of grease cups have been used, so that in ordering caps it is necessary to note carefully the inside diameter of the cap. Determine which of these sizes you have and order by number.

$\frac{5}{8}$ -inch inside diameter—1832  
 $\frac{3}{4}$ -inch inside diameter—1826  
 $\frac{7}{8}$ -inch inside diameter—1858

## Price List of Parts for Stewart Speedometers

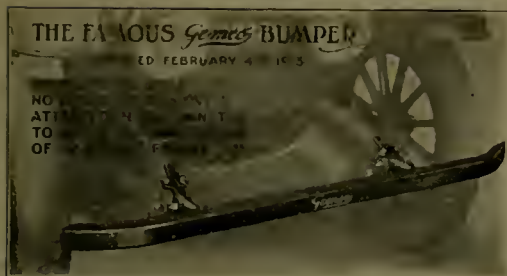
(Effective January 1st, 1919)

Part No.	Description	Price	Part No.	Description	Price
	Swivel Joint .....	\$3.00	4025	Clamp Part (swivel block) .....	\$0.25
	Grease Cup Cap .....	.20	4015	Clamp Part (cross-bar) .....	.30
1799	Flexible Shaft, complete without leather covering .....	3.50	4017	Clamp Part (axle clip) .....	.20
1911	Flexible Shaft Casing, without leather covering .....	2.00	4014	Clamp Part ("S"-clamp link) .....	.30
	Extra length casing (over 78 inches) per foot .....	.40	4007	Clamp Part (cross bar and straight link—one piece) .....	.45
1880	Upper End Clutch of Chain .....	.15		Dash Bracket, angle instrument .....	1.25
617	Sliding Bar and Lower End Clutch of chain .....	.25	1996	Rubber Fender Washer .....	.15
	Road Wheel Gear, complete with Washers and Screws .....	1.25	7208	Strap or Hanger for Flexible shaft .....	.20
	Washers and Screws for use on road wheel gear .....	.15		Angle Sleeve .....	2.00
	Pinion or Small Gear .....	.25		Extra Length Shaft (over 78 inches) per foot .....	.60
512	Clamp for Steering Arm, complete .....	1.50	1902	Flexible Shaft Chain, per foot .....	.30
	Stud Bolt Clamp .....	1.75	1997	Stewart Flexible Shaft Lubricant, per can .....	.50
4003	Clamp Part (upright) .....	.60	616	Flexible Shaft, Ferrule and Union .....	.25
			4032	Clamp Set Screw .....	.10

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## GEMCO UNIVERSAL BUMPER



Large illustration shows Bracket with one yoke for cars with pan.

Small illustration shows Bracket with two yokes for cars without pan.

## The Original Clamp-on, End Thrust Bumper

Their reputation for highest quality and efficiency makes them a standard accessory. And the Gemco Line includes every variety that finds a demand.

Gemco Bumpers fit all cars. To attach them it is not necessary to drill any holes in the frame, remove bolts, or make any mechanical changes whatever.

One of the most attractive features of these bumpers is that they abut against the end or nose of the frame. The thrust of any shock is received at the most rigid point of the car, which, without question is the only logical place to attach a bumper.

Frame castings are finished in black enamel. The balance of the brackets and the bars are finished in either nickel or black.

The adjustable tooth clutch joints of Gemco Bumpers permit perfect adjustment of the bar, no matter how small or great the curve of the car frame.

The frame yokes regularly supplied are  $1\frac{3}{4}$  inches wide and are readily adjusted on most standard frames. For Buick, Overland Sixes, Studebakers and others which have a little wider frame, we are prepared to furnish a 2-inch yoke. If extra wide yokes are required, be sure to specify.

$1\frac{3}{4}$ inch Round Nickel Bar, black fittings, each .....	\$7.00
2 inch Channel Nickel Bar, black fittings, each .....	10.00

## Gemco Fender Pan Bumper

This Bumper is a combination of the end-thrust principle and the side clamp on idea. The bracket rests against the very end of the car frame and at the same time bolts grip the frame channel at the top, while another one, which is adjustable to suit the frame, fastens tightly to the lower end so that slipping—even in a collision—is absolutely impossible.

Will fit (with a very few exceptions) any car now on the market which is equipped with splash pans.

2 inch Nickel Channel Bar, black fittings, each .....	\$9.00
2 inch Black Channel Bar, black fittings, each .....	8.00

## GEMCO MODEL D

This very strong, neat and attractive model is made especially to fit such cars as the—

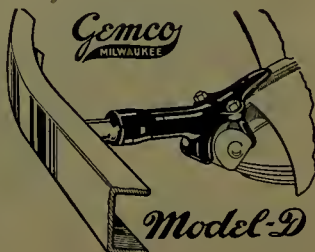
Apperson	Moline-Knight
Dodge	Reo
Mitchell	Mercer
Peerless	Chandler
Jordan	Hudson
Buick 6	Moon
Haynes	Westcott

Note—Specify two-inch yokes for Case, McFarland, Mercer, Oakland, Velie and Winton. Studebaker takes special yokes.

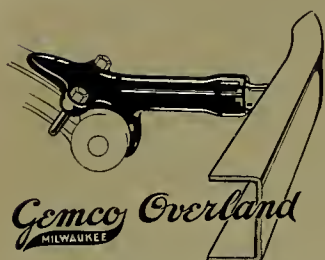
The shock is absorbed by a concealed coil spring in the housing and the thrust comes at the extreme end of the frame.

Very neat, strong and attractive.

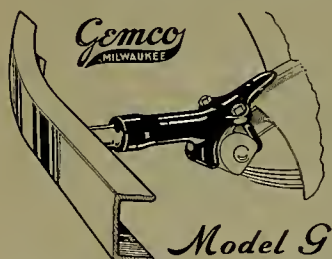
2 inch Channel, nickel bar, black fittings, each .....	\$8.20
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ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



- 1 1/4 inch Round Nickel Bar, black fittings, each ..... \$6.00  
 2 inch Channel Nickel Bar, black fittings, each ..... 8.20



- 2 inch Channel Nickel Bar, black fittings, each ..... \$8.20

## Gemco Patented Overland Bumpers

The large number of Overland cars now sold has created a great demand for a special bumper. The frame casting and spring housing are integral. Two strong yokes are used to secure it to the frame. All of the special features of the Gemco Bumper are included in this bracket. Overland Bumpers will be supplied with any of the bars shown.

Finish: All Frame Castings finished in black enamel, bars in nickel.

## Gemco Patented Maxwell Bumpers

This Bumper is practically the same as the Overland except that the shape is slightly different so as to fit the Maxwell car perfectly. In ordering specify Maxwell. Model G fits the following cars:

Allen	Enger	Maxwell
Cole	Hollier	Moline M. K. 50
Crow-Elkhart	Interstate	Oakland 32
Elcar	King	Paige-Detroit
Empire	Lex'on-Howard	Stutz

Model H Bumper same as model G except with 2 inch yokes. Fits the following cars:

Buick D-54	Buick D-55	Velie (small)
------------	------------	---------------

# Hartford

## SPRING BUMPER



### THREE STYLES

- Black enamel, each ..... \$12.50  
 Black and nickel, each ..... 13.00  
 Nickel, each ..... 14.00

## Your Car Deserves It

Not only protection for your car and its fittings from the damage of collisions and bumps, but real protection for you—that is what a Hartford Spring Bumper gives.

Think of it—another car or a truck or a wagon backs into you; or the vehicle ahead stops suddenly and you slide into it—your Hartford Spring Bumper not only checks the blow before it can reach lamps, radiator or mud-guards, but in its powerful double-loop, double-leaf spring construction it swallows and smothers the shock of most any collision.

Even a 15-mile-an-hour collision is so effectively taken up by a Hartford Spring Bumper that its force only reaches your car as a soft recoil of a few inches! Get the real thing—the Hartford Spring Bumper.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## PHINNEY-WALKER KEYLESS CLOCKS

## RIM WIND AND RIM SET

Are made in various sizes and shapes, and are the most popular auto clocks on the market owing to their superior mechanism, handsome appearance and popular prices.

To wind clock turn rim. To set clock pull out rim, the same as you would set a watch, and rim will automatically spring in position when released.

The locking device for attaching clock to dash is thief-proof.



Model No. 7 Cowl



Model No. 9 Cowl

## BLACK ENAMEL OR BLACK AND NICKEL FINISH

Especially adapted for Cowl dash. Made to be countersunk, so as to project far enough to be wound.  $2\frac{3}{4}$  inch dial.

Rim wind and rim set, each .....\$11.25

## BLACK ENAMELED AND NICKEL FINISH

Especially adapted for Cowl dash. Made to countersink, so as to project far enough to be wound  $2\frac{3}{4}$  inch dial.

Rim wind and rim set, each .....\$11.50

## STEM WIND—ONE DAY



FRISCO No. 1



FRISCO COWL No. 2



NO. 12

A popular clock for automobiles and motor boats. Especially adapted for Ford cars. No screws visible.  $3\frac{3}{4}$  inch high, with  $2\frac{3}{4}$  inch porcelain dial. Brass, nickel or black enamel finish. One-day movement with second hand.

No. 1, 1 day, each .....\$3.25

Designed to be sunk into dash. One day movement with second hand. Concealed winding stem.  $2\frac{1}{2}$  inch dial.

No. 2, 1 day, each .....\$3.35

Black Enamel or Black and Nickel finish. Especially adapted for cowl dash. Made to be countersunk so as to project far enough to be wound.  $2\frac{1}{4}$  inch dial.

Each .....\$10.50

LUMINOUS DIALS for the above—extra..... Each \$1.30

## CALORIS BOTTLES

## CALORIS NO. 2.

Keeps hot liquids hot 30 hours.

Keeps cold liquids cold 84 hours.

This bottle is mounted in a seamless brass case, full nickel plated, highly polished, and must not be compared with any bottle at its price on the market.

It is equal in thermal qualities, looks and finish to any of the higher priced bottles, and superior in construction.

Easiest to separate and put together. Absolutely sanitary and rust-proof.

Pint size .....\$3.25

Quart size .....4.50

## CALORIS NO. 4.

To meet the increasing demand for a first-class low-priced bottle, having all the advantages of the high class articles, there has been designed the Model No. 4.

Padless, cementless and rust-proof. Each bottle guaranteed. Black body, nickel cup and shoulder.



Caloris

Pint .....	\$2.50
Quart .....	3.75
Glass fillers for pints, each.....	1.75
Glass fillers for quarts, each.....	2.50
Nickel cap, gold lined .....	.50
Corks .....	.10

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## MIRROSCOPES



**Square Type.**

Square, 4 x 6 inches (round cornered), finest bevel plate mirror. Adjustable to all angles. Provides you with absolute command of the road in the rear as the eyes do of the road ahead. Clamps on windshield. Finished in all Black.

Each .....\$2.75



**No. 25 Reducing Type.**

5 inches, round with convex mirror, which focuses a wide range of vision; adjustable ball socket. Clamps on the windshield. Finished in Black.

Each .....\$2.25



**No. 3 and 4 Mirrors.**

Convex reflector focuses wide range of vision. Affords the rider every protection against collisions from the rear. A neat, inexpensive round mirror, with finest reducing glass. Adjustable sliding five-piece clamp. Finished in Black.

Size of Mirror

No. 3. 4 inches. Each.....\$1.00

No. 4. 5 inches. Each.....1.50



**Oval Type.**

Oval, 4 x 6 inches. Made the same as the square, with finest beveled mirror; adjustable ball socket. Finished in Black.

Each .....\$2.75



**No. 26.**



**No. 26½.**

**Mudguard Mirror.**

Designed with the view of its being mounted on either of the forward mudguards. Very practical, as it affords a splendid clear vision of the happenings on the road behind. The mirror is 5 in. in diameter, and is of the finest crystal. It is attached to the fender with adjustable ball socket joint on a rigid stand. Finished in Black.

No. 26. Each.....\$2.50

No. 26½ same as No. 26 except that it has no Ball and Socket Joint.

Each .....\$1.50



**Truck Mirror.**

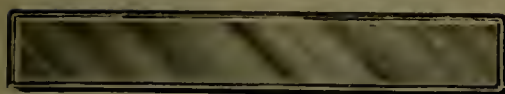
6 in. in diameter, with the finest plain glass; ball socket; arm 18 in. long with two cleats to fasten to truck. Finished in black.

Each .....\$2.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## MIRROSCOPES FOR ENCLOSED CARS



35



36



37



Solve the mirroscope problem for enclosed cars. The mirroscope is fastened inside the car over the windshield and enable the driver to see through the rear window without changing his position.

## Three Styles.

No. 35.	2¼ in. wide by 14 in. long, plain, ea.	\$5.00
No. 36.	4 in. wide by 9 in. long, beveled, ea.	4.50
No. 37.	4 in. round reducing, each	2.25

## MISCELLANEOUS STRAPS



## Price Each

5/8x24 inches	.....	\$0.18
5/8x30 inches	.....	.20
5/8x36 inches	.....	.22
3/4x30 inches	.....	.22
3/4x36 inches	.....	.24
7/8x30 inches	.....	.24
7/8x36 inches	.....	.28

## Trunk Strap Sewed

		1¼ in.	1½ in.
72 in. long, each	.....	\$1.00	\$1.15
84 in. long, each	.....	1.15	1.30
96 in. long, each	.....	1.25	1.55

Used for tire carriers, license tags, rubber bumpers, luggage carriers, starting cranks, cloak rails, etc. With riveted japanned bar buckle.

From anywhere to everywhere this is the book that will guide you every mile—

### The New 1919 AUTOMOBILE BLUE BOOK

*America's Standard Road  
Guide since 1901*



It will give you detailed running directions for every mile to any place that can be reached by automobile—tell you how far any place is and what the roads are like—where to stop, where to eat, where to get gasoline or repairs—point out the scenic and historic places en route—warn you of dangerous curves, grades and crossings ahead—give you every bit of information both before you start and after you're on your way to make your every trip a success.

## A Volume for every Section

Vol. 1—New York State.

Vol. 2—New England.

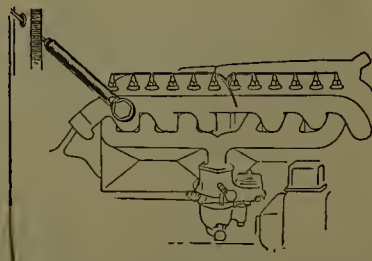
Vol. 3—N. J., Pa., Del., Md., D. C., Va. and W. Va.

Vol. 6—The Southeastern States.

Each volume averages 1000 pages, with hundreds of maps and illustrations. Bound in "Royal Blue" limp binding.

Each, \$3.00.

## LIBERTY SIREN



Attached to the exhaust manifold under the hood of any pleasure car, truck or motor boat.

Operated by the simple pull of a cord (attached to dash or steering wheel column). Costs nothing to operate. Does not in any way interfere with the mechanical operation of your car.

Eliminates battery expense and trouble.

No matter how loud the rattle and rumble of traffic, the Liberty Siren penetrates above the noise, sounds its melodious signal in a way that commands attention and gets it. Easily heard at great distances on country roads.

Made strong and durable, nothing to get out of order.

Price, each .....\$3.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# KLAXON

## "REGULARS"



**KLAXON 12-L**

As efficient as the Klaxon 20. Constructed for underhood installation.

List price . . . Each \$14.00



**KLAXON 20-L**

The finest Automobile Warning Signal made. Penetrating tone, remarkable construction. Needs practically no attention whatever.

List price . . . Each \$25.00



**KLAXON 6**

Slightly smaller in size than the Klaxon 12. Its construction is the crowning result of years of experience in building quality signals.

List price . . . Each \$7.00



**KLAXON 3**

A hand-operated safety signal of the same quality and efficiency as the electrically-operated instruments. Horizontal push rod.

List price . . . Each \$4.00



**KLAXON 3-V**

Vertical push rod. In every other respect the same as Klaxon 3.

List price . . . Each \$4.00

## "SPECIALS"



**KLAXON 20-Deck**

Klaxon 20-L with swivel bracket. Constructed for installation on automobile running boards or for yachts and motorboats.

List price Each \$27.50



**KLAXON 20-S**

Same mechanical construction throughout as the Klaxon 20-L. The short projector makes practically no difference in tone.

List price Each \$25.00



**KLAXON 12-S**

Same mechanical construction throughout as the Klaxon 12-L. The short projector makes practically no difference in tone.

List price Each \$14.



**KLAXON 10**

The most reliable and powerful hand-operated signal ever made. Occupies the same position in the field of hand-operated signals as does the Klaxon 20 among motor-driven signals. Built especially for trucks and fire apparatus where sturdiness is essential and where best obtainable is desired.

List price Each \$12.00



**KLAXON 5**

The same—mechanically—as the Klaxon 6, but has a torpedo projector. Sold stripped: without wires, push button or bracket. Special screws are furnished for individual mountings. In ordering specify for what cars they are intended and whether for 12 volt or single wire system.

List price . . . Each \$6.00

**KLAXON 3-M. C.**

Same as Klaxon 3 but constructed with short projector for motorcycle use. Furnished with handlebar, frame or tank brackets.

List price . . . Each \$3.75

**KLAXON 3-V. M. C.**

Same as Klaxon 3-V, but constructed with short projector for motorcycle use. Furnished with handlebar, frame or tank brackets.

List price . . . Each \$3.75

Klaxons are regularly finished in all black. For all other finishes such as black and nickel, black and brass, etc., add \$1.00 to the list prices. Electric Klaxons can be operated from dry cells or storage batteries. They are regularly wound for 6 volts. For special voltages up to 21 volts no extra charge is made.

## LOOK FOR THE KLAXON NAME PLATE

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## RADIATOR ORNAMENTS

Strongly made of heavy cast metal, simply and securely attached in an instant. Finely finished in gold plate, guaranteed 24 Kt. pure. Also Nickel Plated.



Shriner No. 5421

Height, 2 3/4 in.; width, 4 1/2 in.

Each .....\$2.00  
Also Solid Brass, Nickeled, each ..... 2.00



Elk No. 5238  
Height, 3 in. Width,  
2 in.  
Each .....\$1.00

No. 5273  
Height, 5 in. Width,  
4 3/4 in. Each .....\$2.00



M. D. Cross No. 5430

Height, 3 in. Width,  
2 1/2 in.  
Each .....\$2.00



Eagle No. 5405

Height, 4 in. Width, 6 in.

Each .....\$2.00



America First 8006  
Height, 3 in. Width,  
5 1/2 in.

Finished in gold or  
nickel and enameled col-  
ors.

Each .....\$2.00



Stationary Cop 8008

Height, 6 in. Width,  
2 3/4 in.

Each .....\$1.25



Revolving Cop

Height, 8 3/4 in.  
Width, 4 1/2 in.

Each .....\$2.00

Safety First whirling cop's arms and body rapidly revolve on the slightest motion of the car or when struck by the least breath of wind. Handsomely furnished in natural colors with blue uniform and helmet, gold buttons, shield, white gloves and red face, absolutely non-breakable, combining lightness with extreme strength.



Shriner Radiator

Fits on face of radiator, with wire to fasten.

Nickel Plated, each .....\$2.00

## Bouquet Holders



Made of genuine lead cut glass.  
Brushed silver mountings. Patent  
special device for ease of removing  
when filling or cleaning. Furnished  
with splash top, which prevents  
water from splashing over.

No. 746—282. Length over all,  
12 inches, each .....\$7.50

No. 491—364. Length over all,  
8 inches, each ..... 5.75



No. 491-364

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## JOHNSON CURTAIN WINDOWS

## Of Beveled Plate Glass



No. 6, \$2.50

There are 17 different styles of windows, some one of which will suit any size or style of top. The three styles illustrated are among the most popular.

No. 6 is a small round window and is frequently used in pairs in the rear curtains, but is particularly adapted for use in the side curtains.

Nos. 12, 16 and 20 are perhaps the most popular styles of all. Nos. 12 and 16 are usually installed in pairs in the rear curtain. When the No. 20 is used a single window is installed.

No. 36 is very popular as a rear window, owing to its size and shape, and the breadth of vision it offers. Johnson Windows are guaranteed by the manufacturer to give absolute satisfaction in every way. They are easy to install and complete directions are furnished with each window.

Real Plate Glass. Improves the appearance of your car. Gives unobstructed vision. More light in the back of the car. Beautiful and useful, they solve the top question.



No. 12.	12 in. x 6 in.	\$4.50
No. 16.	16 in. x 8 in.	6.00
No. 20.	20 in. x 10 in.	8.00



No. 36. 20 x 8 in. \$9.00

## CURTAIN FASTENERS



No. 12 Fasteners are for fastening to back leather quarters and other flexible materials.

No. 11 Fasteners are for screwing into the woodwork. No. 6 Fasteners are for screwing onto bows or other woodwork. All Fasteners complete with eyelets.

Nickel  
or Black

No. 11.	Single, per doz.	\$1.00
No. 11.	Double, per doz.	1.10
No. 6.	Single, per doz.	.75
Eyelets,	per doz.	.30
No. 6.	Double, per doz.	.90
No. 12.	Single, per doz.	.60
No. 12.	Double, per doz.	.80

The Cinch automobile and carriage curtain fasteners eliminate torn and ripped curtains.

They are extremely easy to operate, simply by pushing the eyelet over the fastener, the curtain is caught and locked.

The locking trigger action is positive, making it impossible for the curtain to loosen itself or blow open. To release grasp the curtain, push trigger with thumb of hand. No twisting, no turning, no pulling, no trouble of any kind.

Can be installed quickly and easily. The eyelet being round, does not have to be aligned, but can be attached in any position without affecting the ease of operation.

Made of brass, nickel plated, and will not rust, rattle or get out of order.

No. 301	Single. Per doz.	\$0.75
No. 302	Double. Per doz.	\$1.25

Complete with eyelets and washers.



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## OUTLOOK WINDSHIELD CLEANER

### A Type for Every Car

With an occasional stroke of your cleaner, rain, snow or mist disappear and you can drive with safety.



### OUTLOOK REGULAR

Clamps on the top of the windshield. For open cars that have a small space between the windshield and the top, can be attached in a very few minutes.



### OUTLOOK SPECIAL

Made for closed cars. To attach, bore a hole in the windshield glass. Makes a very neat appearance.



### THRU THE FRAME

Fits any open car regardless of how closely the top fits on the windshield. Attached by boring a hole in the frame. All models equipped with spring steel, tension bars. High quality rubber wipers and the exclusive rubber roller.

**OUTLOOK** \$2.00 EITHER STYLE  
WINDSHIELD CLEANER WITH THE RUBBER ROLLER  
MADE IN CANADA 127

## Wind Shield Weatherstrip

KEEP OUT RAIN AND SNOW

No. 97. For Standard Windshields.

Made to fit all standard windshields. Comes in 42 in. lengths; packed fifteen lengths to a box. Can be furnished in any length up to ten feet on special orders.

Each .....\$0.75

No. 109. For Offset Windshields.

Made especially to fit offset windshield on Ford car. Comes in 37 in. lengths; packed twelve lengths to a box. Can be furnished in any length up to ten feet on special orders.

Each .....\$0.75

## C-CLEER



THE ORIGINAL TRANSPARENT WINDSHIELD PASTE

C-CLEER is a simple transparent paste that is rubbed on the windshield glass in inclement weather. It absolutely sheds rain, sleet, snow or any other matter that could obscure the glass.

Per can .....\$0.25

## CELLULOID



Sheet celluloid for automobiles, storm fronts, curtains, buggies, and any place where celluloid can be applied.

This celluloid is made of best quality, very clear, even thickness throughout, comes in very handy for repair work and every garage should have some on hand.

.015 thickness	per
Size 20 x 50 sheets	Sheet
Size 20 x 25 sheets	\$1.50
	1.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME

## GOGGLES AND DRIVING GLASSES



NO. Z1 ZYLBEX EYE PROTECTOR

A unique eye protector combining unusual features of comfort, distinctive design, and quality at a popular price. Affords protection at sides as well as front and can be worn over other glasses. Fine quality Zylonite (imitation tortoise shell) frames. High-grade mi-coquille lenses, amber or white. Soft leather sides. Gilt alloy or white metal cable riding bow temples. Each pair in a neat cloth covered steel case.

Price per pair, including case.....\$1.50



ALBEX EYE PROTECTOR

Without doubt one of the most popular styles. Light as a feather, compact, adjustable and perfectly complete in its protection. Solid white metal frame, easy cable temples, well ventilated leather sides and the Exclusive Wilson Adjustable Brace Bridge.

Style A1, per pair, including case.....\$1.25



STYLE NO. 9595—RIMLESS SPECTACLE

2-in. round lenses. White metal mountings, well finished. Amber or white lenses. Designed to hold lenses firmly.

Price, with case, each .....\$0.50



NO. Z21 ZYLBEX PROTECTION GLASS

A novel and distinctive style, new in every way. Combines a high quality, comfort, distinction and can be worn over other glasses. Fine quality Zylonite (imitation tortoise shell) frame; gilt alloy or white metal cable riding bow temples. High-grade mi-coquille lenses in amber or white, 1 3/4 in. diameter. Each pair supplied in a neat box.

Price, per pair, including box.....\$1.25



UNIVERSAL GOGGLE

Made of rust-proof white metal, riding bow temples, saddle bridge. Amber lenses 1 3/4 inch diameter. Each pair furnished in an attractive, hinged cover, black box.

Price, per pair .....\$0.75

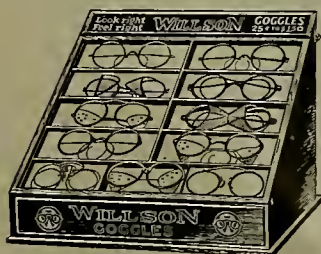


STYLE NO. 2595—FRAMED SPECTACLE

Large round flat lenses 2-in. diameter. Amber or white. Neat, but extremely substantial frame of rust-proof metal, patented construction.

Price with case, each .....\$0.35

## DISPLAY CASE ASSORTMENTS



This is the new attractive, serviceable mahogany-colored display case which will be furnished free with three assortments.

Case is 11 in. x 14 in. x 1 1/2 in., has rubber feet. Goggles displayed under glass and on champagne color velvet in separate compartments.

The attractive case prevents overstocking and offers the goods in the logical manner.

Twelve styles in all display cases. Prices range from 25c. to \$1.50.

Price

Offer No. 1, 47 pairs goggles.....\$35.00

Offer No. 2, 63 pairs goggles.....36.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## Chain Tire Lock

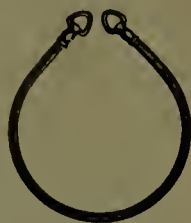


36 inch with Lock, each ..... \$1.60  
 42 inch with Lock, each ..... 1.75

## Hoover Cable Tire Lock

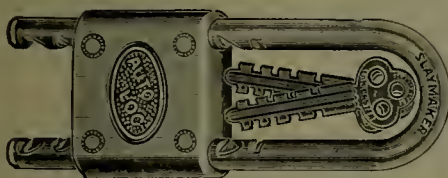
Chain Tire Lock, made of the finest grade electrically welded steel links, covered with genuine leather; furnished with Yale lock and two keys.

Hoover Cable Tire Lock consists of a special hardened steel cable, securely fastened into special attachments and neatly covered with leather. Each cable is put under a pulling pressure of 1,000 pounds. Its use means no stolen tires.



36 inch without Lock, each ..... \$0.65  
 42 inch without Lock, each ..... .75

## Auto Loc



Is used for locking the spark and gas levers of an automobile together or for securing the emergency brake to the shifting lever.

Size across case,  $2\frac{3}{4}$  inches; inside length of shackle is  $4\frac{1}{4}$  inches, adjustable to  $\frac{5}{8}$  of an inch.

Polished cast brass with brand in red relief.

Hardened steel rod shackle; two corrugated steel keys; half dozen in a box.

Each ..... \$1.00

## Pad-Locks



No. 2887

No. 2879

All brass, buffed, ball bearing, pin tumbler cylinder, 2 German silver keys to each lock. Size  $1\frac{3}{4} \times 1\frac{3}{4}$  in. No two locks alike except on special order. Keys cannot be removed except when lock is locked.

Each, 1 lock in a box, No. 2887 ..... \$1.25

No. 2879

All brass, buffed, ball bearing, pin tumbler cylinder, 2 German silver keys to each lock. Size 1 in.  $\times$  15-16 in. No two locks alike except on special order. One lock in a box.

Each ..... \$1.50

No. 2881

Same as above except in size. Measures  $1\frac{1}{4}$  inches.

Each ..... \$1.75

No. 2882 A

Has steel shackle, non-rusting and measures  $1\frac{3}{4}$  inches.

Each ..... \$2.00

## Goodrich Steering Column Lock

It has the appearance when locked of being a single metal connection between the steering column and the wheel. There isn't a bolt or screw exposed and the construction is so strong as to defy attempts to pry it apart or cut it off.

The cylinder is built by Yale and there are no two keys alike—yours has no duplicate.

A single turn of the key locks the steering column. Your car cannot be driven because the front wheels are held rigid in one position. The car can be pushed a short distance forward or backward in a straight line in case of fire or accident, but it cannot be towed or driven away.

It fully meets the requirements of the law without the sacrifice of efficiency.

For all cars, each ..... \$9.25



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## Ball Type



## NEUTRALLOCK

The Neutrallock locks the gear shift in neutral, making it impossible to run the machine under its own power. It also does away with any possibility of an unexpected or accidental start. It is the logical lock for your protection.

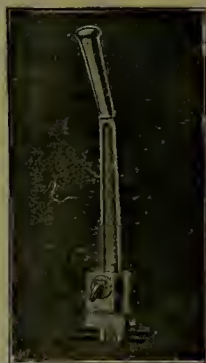
Its locking action is so simple that you will never forget to lock your car when leaving it. Simply step on lock or press it with your hand and it will lock automatically. Equipped with a Yale lock, there are no duplicate keys and it cannot be unlocked with a master key.

The Neutrallock does not, however, prevent your car being moved in case of emergency, thereby complying with all fire and police ordinances.

Approved by the Underwriters Laboratories, it will reduce your theft insurance, which is a feature well worth considering.

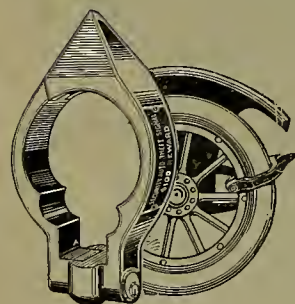
Made for practically all cars and for different models. In ordering state model, year and make of car.

## H Type



For H Type Gear Shifts, any model .....	\$8.50
For Ball Type Gear Shifts, any model .....	10.00

## SECURITY AUTO THEFT SIGNAL



The Security Auto-Theft Signal is a strong metal shackle made to attach to the right front wheel of the car. It has a big pointed hump which protrudes about six inches beyond the tire and which will make a terrific bump and jolt every time it hits the ground as the wheel revolves; if the car is driven with it on, the pointed hump makes a hole in the road with every revolution of the wheel—a distinct trail by which a thief may be followed.

The Security Auto-Theft Signal is not a lock, but a preventive. No one will attempt to drive your car away with one on because of the attention it attracts. And they can't get it off. It is so strong and so hard it would take hours to cut it off and the lock is practically unpickable. Made to fit all sizes of tires. In ordering give size and make of tires, make and year of car and whether wood or wire wheels, to insure a perfect fit.

## PRICES.

3 inch tire size .....	\$7.00
3½ inch tire size .....	8.00
4 inch tire size .....	9.00
4½ inch tire size .....	10.00
5 inch tire size .....	12.00

## PERRY AUTO LOCK

The Perry Auto Lock is one of the best known and most practical locks on the market. It locks the car in a vital place—the steering wheel.

When locked the steering wheel is temporarily disconnected and a twist will spin it like a top. Your car is then like a ship without a rudder and cannot be driven or towed away. It does not, however, prevent the car from being moved in case of an emergency.

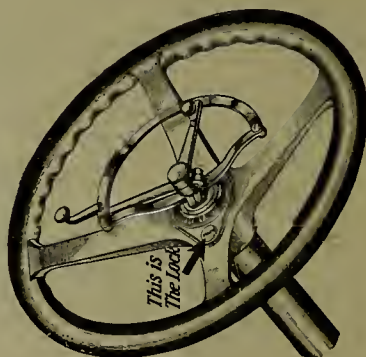
These locks are approved by the Underwriters Laboratories and insurance companies allow at least 15 per cent. reduction in rates where they are used.

Perry locks are made for nearly all cars.

Complete lock includes an aluminum spider with a heavy black walnut rim, with corrugated grips that fit the hand. Arms are fastened to the rim with nickel plated screws and the wheel will add greatly to the appearance of your car.

Equipped with a Yale lock.

Price, complete .....\$16.00



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## COATS



- Our coats you will find are well fitting, made right and of excellent material.
- |   |        |
|---|--------|
| Model 1500, a well-made, loose fitting linene dust coat, 52 inches long, single-breasted, with military lay down collar, patch pockets, linen color ..... | \$2.25 |
| Model 1510, same as the above except double-breasted .....  | 2.75   |
| Model 1535, gray linen dust coat, 52 inches long, double-breasted, with regular military collar, has slash pockets .....                                  | 3.50   |
| Model 774, genuine Irish linen, 10 buttons, double-breasted, wind cuffs in sleeves, military collar .....   | 6.00   |

## Auto Cushion



Absorbs shock and rests the back of driver; also enables driver to easily reach foot pedals. Built concave to fit the back. Full stuffed.

No. 1. 15 x 15, each .....\$6.00

## Running Board Mat



## KLEAN KLIP.

The neatest and best Running Board Mat on the market. No fussing with attachments or adjustments. The mat is complete with attachments, ready to slip on or off instantly. Will fit any car. Woven from genuine cocoa fibre yarn imported from India, and is the only one that will thoroughly cleanse the feet. On account of its construction the moisture sinks to the bottom, the top drying off quickly. Size 10 x 14 inches.

Each .....\$2.25

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



### For Cleanliness, Style, Comfort and Economy

Perfectly tailored to fit more than 1000 models of cars, no measuring nor fitting, merely give the name, year and model of car

#### Protect Your Clothes From Grease and Dirt

Bright and clean Gordon Easy-On Seat Covers, hide the dinginess of travel-worn cushions, and keep the ugly stains of grease and coloring matter that work out of leather and its substitutes from your clothes. There are no tufts nor folds to gather dust to be "pumped" out onto your clothes at every jolt on the upholstery springs.

#### Easily Cleaned

Gordon Covers are easily cleaned with a whisk broom, or washed with soap and water when occasion demands. They save many a cleaner's bill on suits and dresses. Gordon fabrics are chosen especially for their cleanable features.

#### Profitable Economy

Aside from their protection to clothing they save deterioration on the car by protecting the upholstery from blistering hot sunshine, dampness and chafing that soon take the life out of leather and its imitations.

Gordon Seat Covers are a luxury in comfort, because of their fresh, cool surface in summer and as a protection in winter from the chill of leather cushions, but they actually put money in your pocket when you turn in your present model toward a newer one.

#### Restore the Fresh, Clean Look to Old Worn Upholstery

Gordon Seat Covers actually make flattened, worn and shabby cushions look more attractive than when new, and equally as serviceable. They give a used car an up-to-date look comparable with any newer model. A car on which the upholstery is renewed with Gordon Seat Covers is presentable as long as it is fit to run.

#### Give Your Car a Distinctive and Attractive Appearance

Second only to the service you get from your car is the satisfaction and pride you take in its appearance. Gordon Covers give it an inviting atmosphere of comfort and neatness. You will be thoroughly pleased with the trim, "tailored" effect, and the distinctive appearance of your car in Seat Covers of a color and pattern of your own selection. Gordon Covered cushions are cooler in summer and warmer in winter, than bare leather.

#### Gordon Fabrics

Whatever price you pay for a set of Gordon Seat Covers, you can be sure that the material is the finest obtainable at that price. Every fabric used must pass thorough tests, it must be of the right weight and weave, so it will be durable. That is why Gordon Covers clean easily and give several seasons' wear. A material that passes the Gordoo quality tests will retain that tailored shape and style, which contrasts Gordon Seat Covers with the ordinary kind. It means the difference between Seat Covers that stretch and tear and Gordons that fit neatly.



Save your clothes. Save the Upholstery.  
Renew old, shabby curtains.



## GORDON EASY-ON SEAT COVERS—Continued



LOOK FOR THE  
OVERLAPPED CORNERS

Patent Applied For

An Exclusive GORDON Feature

The new three-piece or sectional Overlap Lazy-back Covers afford four new and very desirable features:

- easier and more quickly attached.
- adjustment to make misfits impossible.
- relieves all strains on fabric and fastenings.
- preserves easy riding qualities of upholstery.

## The Overlap Adjustments

The middle or lazyback section overlaps on each arm section four or five inches and this provides an adjustment to take care of any variation in the upholstery of cars of the same model. It is impossible for a cover to be too small for a car on which the upholstery is overly full, or too large should the upholstery not be up to usual fullness. This adjustment overcomes the cause of trouble; a variation either way in the upholstery simply makes a corresponding change in the amount the lazyback section overlaps on the arm rests.

## Easy to Attach

Gordon Seat Covers are attached with glove fasteners made extra strong. They come ready to put on; all you have to do is to screw in the studs and this is done with an ordinary screw driver without injuring or marring the body in any way. Each section bears a ticket telling where it belongs.

## Better Satisfaction for the User

This three-piece construction gives the full benefit of the springs in the upholstered lazyback because the overlap gives with the movement of the upholstery when you lean back. It gives better service because the overlap relieves all strain on fabrics, seams and fastenings.

## Parts Covered

A complete set of Gordon Covers include covers for the cushions, lazybacks, arm rests, doors and dash pieces. Door pieces are furnished with pockets. Top Slip Covers are not included, but can be supplied as per list below.

## DESCRIPTION OF MATERIALS AND PRICES

## WASHABLE FABRICS

No. 1037. Linen, plain tan.

No. 1071. Black and white mixture.

The above numbers are recommended for sedans and all closed cars. Can be washed, dry cleaned or cleaned with gasoline.

## RUBBERIZED FABRICS

No. 1000. Tan shade.

No. 1027. Black and white diagonal stripe.

No. 1074. Tan, a rich color and very serviceable.

No. 1032. Black and white pin strips.

No. 1051. Olive mixture, a very pleasing shade.

No. 1050. Grey mixture, neat and serviceable.

Rubberized materials can be cleaned with soap and water and brush.

## COATED BACK FABRICS

No. 1042. A Beautiful Brown Mixture and Excellent Wearing Fabric. It is different from the Rubberized materials in that it may be laundered, dry cleaned or cleaned with gasoline.

For open cars we recommend either Rubberized or Coated Back Materials, as dust and dirt cannot sift through and remain on the leather cushions underneath.

A complete detailed list giving prices on Seat Covers of above materials for each of more than one thousand models of cars and samples of materials will be supplied on request.

Seat Covers	MATERIALS			
	1037 and 1071	1000 and 1050	1074, 1032 and 1027	1051 and 1042
2-Pass. Cars.....	\$ 8.25 to \$22.75	\$15.25 to \$28.00	\$17.50 to \$30.75	\$20.25 to \$35.25
3-Pass. Cars.....	12.75 to 31.50	16.25 to 38.00	19.25 to 43.00	21.50 to 48.50
4-Pass. Cars.....	17.50 to 38.50	22.25 to 50.25	25.75 to 54.00	29.75 to 60.50
5-Pass. Cars.....	21.50 to 40.75	29.25 to 52.50	34.00 to 57.25	39.50 to 65.00
6-Pass. Cars.....	25.75 to 43.25	32.75 to 53.75	38.00 to 61.50	44.00 to 70.50
7-Pass. Cars.....	27.50 to 47.75	37.25 to 61.75	44.50 to 68.25	51.75 to 78.00
Ford Touring .....	17.50 to 20.50	21.25 to 24.00	25.75 to 29.00	28.25 to 31.50
Ford Roadster .....	10.50 to 11.50	11.75 to 13.50	14.00 to 16.25	15.25 to 17.50
Ford Sedan .....	24.00 to 25.50	27.50 to 29.00	33.25 to 35.00	36.00 to 38.00
Ford Coupelet .....	13.50	16.00	19.25	21.00
*Top Slip Covers				
Without bow cov'rs..	6.40	7.25	7.75	8.50
With bow covers....	7.75	9.25	10.00	11.00
†For Ford Cars.....	5.75	6.00	7.50	8.00
*Kick Pads				
All cars ex. Ford....	3.50	4.25	4.60	5.25
For Ford Cars.....	2.90	3.00	3.80	4.25

\*Top Slip Covers are extra at these prices. Regular or full length bow covers are supplied only according to way pattern is made for any car.

†Top Slip Cover for Ford Cars supplied with full length bow covers at \$1.50 extra.

‡These prices apply for Kick Pad except on some models where Kick Pad is included.

In ordering give the number of material selected, name, year, model and passenger capacity of car.

Trimming.—Nos. 1057 and 1071 are washable materials and do not have artificial leather arm rests and bindings. All other numbers have Gordon Art. Leather arm rests and bindings. On special orders Nos. 1057 and 1071 will be made with artificial leather arm rests and bindings at extra cost, as follows: 2 and 3 passenger cars, \$2.25; 4 and 5 passenger cars, \$4.75; 6 and 7 passenger cars \$6.00.

# HOUK

QUICK CHANGE

## WIRE WHEELS

— FOR —

**SAFETY AND STRENGTH  
QUICK TIRE CHANGE  
BEAUTY AND COMFORT**

Wire wheels are endowed with grace, strength and endurance, and are selected by owners and manufacturers of the highest class to harmonize with the beautiful lines of America's most distinguished cars. For safety, gasoline and tire economy, easier riding and longer car life due to reduced vibration, as well as the "Quick Tire Change" feature, there is nothing like Wire Wheels.

### HOUK WIRE WHEEL PARTS



**SPOKE.** Specify whether inside, center or outside row of wheel, and advise if used with or without lock ring, also specifications called for below.

Nipple included. Each - 10c

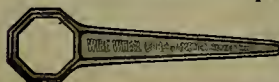


**HUB CAP.** Specify number, right or left side of car, with specifications called for below.

DIAM. AT THREADS

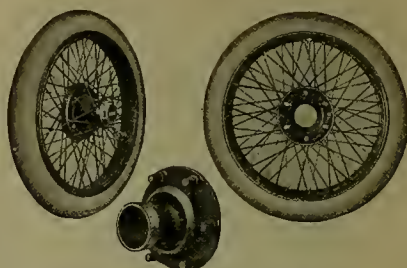
No. 3	2 1/4-inch	each	\$3.00
No. 4	3 -inch	each	3.50
No. 5	3 5/8-inch	each	4.50
No. 6	4 3/4-inch	each	5.50

**HUB CAP WRENCH.** Specify number.



No. 3	\$0.50
No. 4	.60
No. 5	.80
No. 6	1.00

In ordering parts, always specify make, model and year of car. Also size and type of tire being used, whether straight side or clincher with diameter of hub cap at threads.



### A SET INCLUDES

- Five Wheels, complete.**
- Four Inner Hubs, one for each axle.**
- Four Hub Caps.**
- Dust Cover for spare wheel.**
- One Hub Cap Wrench.**
- One Spoke Wrench.**

Wheels are furnished in black enamel when color is not specified. All other colors, price extra. The wheels are crated and shipped ready to attach to the axle spindles.

Following is a partial list of cars for which we can furnish complete sets on prompt factory shipment.

Apperson	Hudson	Paige
Buick	Huppmobile	Premier
Cadillac	Kissel	Reo
Chalmers	Lexington	Roamer
Chandler	Marmon	Saxon
Chevrolet	Maxwell	Scripps-Booth
Cole	Mitchell	Stanley-Steamer
Detroit-Electric	Moline	Stearns
Dodge	Nash	Studebaker
Elgin	National	Stutz
Essex	Oakland	Velie
Franklin	Oldsmobile	Willys-Knight
Haynes	Overland	Winton

If the car you wish to equip is not mentioned above, it can no doubt be equipped with Houx Wheels as the manufacturers have specifications covering over five hundred models of American cars.

When ordering or writing for quotations, kindly state the model, make and year of car, also size of rim and color desired.

## HOUK WIRE WHEELS

Prices on application. State size of wheel, name and model of car

# RACINE TIRES



EXTRA

TESTED



**RACINE  
MULTI-MILE CORD**  
(Ribbed Tread)



**RACINE  
COUNTRY ROAD TREAD**



**RACINE  
MULTI-MILE CORD**  
(Anti-Skid Tread)

Racine Multi-Mile Cord Tires alone have the Racine Absorbing Shock Strip. This is an extra strip of blended rubber uniting the tough rubber of the tread to the rubberized carcass of the tire. Eliminates danger of tread and carcass separation. Exclusive development of Racine Rubber Co. chemists.







## RED AND GRAY TUBES

### RACINE RUBBER COMPANY LIST PRICES MAY 12, 1919

SIZE	PLAIN CASINGS	CTRY ROAD CASINGS	FABRIC TYPE C Q S	RIBBED CORD CASINGS	NONSKID CORD CASINGS	CORD TYPE C Q S	CODE CASINGS ONLY	SIZE	GRAY TUBES	RED TUBES	CODE TUBES ONLY
28x3	\$13.70	\$16.85	x o o	\$ . . . .	\$ . . . .	o o o	Cackle	28x3	\$ 2.95	\$ 3.40	Tabe
30x3	14.00	17.05	- o o	.....	.....	o o o	Cactus	30x3	3.00	3.55	Tangle
32x3	.....	.....	.....	.....	.....	.....	.....	32x3	3.25	3.75	Task
30x3-3½	Universal	.....	.....	.....	.....	.....	.....	30x3-3½	3.35	3.80	Tutor
30x3½	17.30	20.55	- o o	.....	.....	o o o	Cett	30x3½	3.25	3.85	Tender
31x3½	18.15	22.05	x o o	.....	.....	o o o	Ceruse	31x3½	3.75	4.20	Test
32x3½	20.10	23.95	o x -	36.20	38.00	o o -	Censor	32x3½	3.85	4.40	Tempt
33x3½	.....	.....	.....	.....	.....	.....	.....	33x3½	4.10	4.60	Telic
34x3½	24.55	27.15	o x o	.....	.....	o o o	Ceer	34x3½	4.25	4.80	Tercet
36x3½	.....	.....	.....	.....	.....	.....	.....	36x3½	4.45	5.00	Teehy
31x3¾	22.75	27.50	x o o	.....	.....	o o o	Cupe	31x3¾	.....	.....	.....
31x4	26.40	31.95	- o o	44.50	46.50	- o o	Chant	31x4	4.55	5.20	Thaw
32x4	26.95	32.55	x x -	45.95	48.25	o x -	Chew	32x4	4.70	5.35	Theory
33x4	28.15	34.25	x x -	47.15	49.50	o o -	Chigoe	33x4	4.95	5.55	Thick
34x4	28.85	35.05	x x -	48.25	50.85	o x -	Choir	34x4	5.20	5.85	Thorn
35x4	30.75	36.55	o x o	.....	.....	o o o	Chub	35x4	5.50	6.05	Thymic
36x4	31.30	37.10	o x x	.....	.....	o o o	Chive	36x4	5.65	6.35	Throw
37x4	.....	.....	.....	.....	.....	.....	.....	37x4	5.90	6.65	Theca
32x4½	36.55	43.65	o x -	51.80	54.20	o o -	Cion	32x4½	6.10	6.70	Tidy
33x4½	37.60	45.05	o x -	53.10	55.80	o o -	Cibol	33x4½	6.25	6.85	Timid
34x4½	38.90	46.50	x x -	54.50	57.35	o o -	Cipher	34x4½	6.40	7.00	Tipor
35x4½	40.60	48.60	x - -	55.80	58.65	o o -	Cirrus	35x4½	6.50	7.15	Tisic
36x4½	41.25	49.40	x x -	57.15	60.05	o x -	Civil	36x4½	6.80	7.45	Tinkle
37x4½	43.15	51.50	o x x	.....	.....	o o o	Cinque	37x4½	7.10	7.75	Tile
38x4½	48.25	57.00	o x o	.....	.....	o o o	Cider	38x4½	7.40	8.05	Tippet
33x5	.....	.....	o o o	64.65	67.95	o o -	Crab	33x5	7.55	8.30	Trap
34x5	.....	.....	.....	.....	.....	.....	.....	34x5	7.65	8.45	Trial
35x5	46.35	57.10	o - -	67.90	71.15	o - -	Crane	35x5	7.75	8.55	Trun
36x5	48.00	57.90	o x o	69.70	73.00	o o x	Crop	36x5	7.95	8.85	Trot
37x5	49.15	60.35	o - -	70.95	74.00	o - -	Crown	37x5	8.15	9.00	Treat
39x5	.....	.....	.....	.....	.....	.....	.....	39x5	8.45	9.50	Trance
37x5½	64.50	76.10	o x o	.....	.....	o o o	Collie	37x5½	9.00	10.00	Tool
38x5½	66.65	78.15	o x o	.....	.....	o o o	Colon	38x5½	9.25	10.25	Toey
36x6	.....	.....	.....	.....	98.20	o o -	Cutter	36x6	15.45	.....	Typhoon
38x7	.....	.....	.....	.....	138.90	o o -	Cubic	38x7	22.30	.....	Tyrone
40x8	.....	.....	.....	.....	178.95	o o -	Cymbol	40x8	26.50	.....	Tyrant

The letters C Q & S under Fabric and Cord Types indicate Clincher, Quick Detachable and Straight Side, respectively. The signs o, -, and x, under C Q & S indicate as follows: - Casings made up regularly for stock. X Casings made up on order only and not subject to return for credit. o No equipment.

#### Prefix the following words to code telegrams:

- For Regular Clincher type casings: CLINCHER.
- For Quick Detachable Clincher type casings: DETACHABLE.
- For Straight Side or Dunlop type casings: STRAIGHT.
- For RACINE Plain Tread Casings: PLAIN.
- For RACINE Country Road Casings: COUNTRY.
- For RACINE Multi-Mile Ribbed Tread Cord Casings: RIBBED.
- For RACINE Multi-Mile Nonskid Cord Casings: NONSKID CORD.
- For RACINE Automobile Tubes: GRAY or RED.



# RACINE TIRE SUNDRIES

## SUPREME INSIDE BLOW-OUT PATCH



The Supreme Inside Blowout Patch is made from multiple plies of new, high grade, carefully selected frictioned fabric, and it is fully formed and molded to fit perfectly the arc of the tire, and is provided with flaps, extending outward between the bead of the tire and the rim, holding it firmly in place, to prevent any possibility of tube chafing. This patch is provided with fine rubber tips.

3 inch .....	each \$0.65
3½ inch .....	each .75
4 inch .....	each .90
4½ inch .....	each 1.05
5 inch .....	each 1.15

## SUPREME LACE-ON BOOT



The Supreme Lace-on Boot is manufactured of the same high quality material as is used in making up the Supreme Hook-on Boot, the only difference being in the method of application.

Each Supreme Lace-on Boot is furnished with grommets and extra long laces.

3 inch .....	each \$0.95
3½ inch .....	each 1.10
4 inch .....	each 1.25
4½ inch .....	each 1.40
5 inch .....	each 1.55

## SUPREME HOOK-ON BOOT



The Supreme Hook-on Boot is designed to hold rim cuts as well as tread blow-outs. This boot is to be used in conjunction with a Supreme Inside Blowout Patch where cut or blow-out are unusually large.

The Supreme Hook-on Boot has a very tough tread and the body is made of strong selected, high grade fabric, impregnated with rubber. Made in clincher or straight side.

3 inch .....	each \$0.95
3½ inch .....	each 1.10
4 inch .....	each 1.25
4½ inch .....	each 1.40
5 inch .....	each 1.55

## SUPREME TIRE PLASTER PATCH

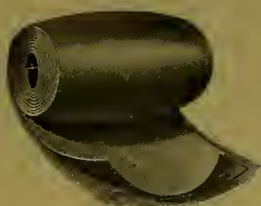


The Supreme Tire Plaster Patch is made up of several plies of high grade fabric. One side is coated with raw gum, assuring adhesion to the tire and preventing all possibility of working loose. This patch is to be used for placing over small cuts and fabric breaks on the inside of the tire.

No. 1. Size 5 in. x 7 in. ....	each \$0.40
No. 2. Size 7 in. x 9 in. ....	each .55

## RACINE TIRE SUNDRIES

### SUPREME TIRE RELINERS



The Supreme Tire Reliner is made of multiple plies of high grade rubber, impregnated fabric, vulcanized and so formed as to fit the inside of the tire perfectly. Constructed with a narrow step back between plies to prevent cracking or breaking. Cement coated ready for use.

30x3"	.....	\$3.40
30x3½"	.....	3.85
31x3½"	.....	3.90
32x3½"	.....	4.00
31x4"	.....	5.15
32x4"	.....	5.20
33x4"	.....	5.30
34x4"	.....	5.35
32x4½"	.....	5.80
33x4½"	.....	5.95
34x4½"	.....	6.10
35x4½"	.....	6.20
36x4½"	.....	6.35
35x5"	.....	6.90
36x5"	.....	7.15
37x5"	.....	7.35

### SUPREME VALVE BASES



Supreme Valve Bases are made of fabric and rubber, and are used in repairing tubes from which the valve bases have been torn.

No. 1 (Red or Gray) small	.....each	\$0.20
No. 2 (Red or Gray) large	.....each	.25

### SUPREME FLOATING FLAPS

Supreme Floating Flaps are made from carefully selected fabric, having a canton flannel surface next to the tube.

3 inch	.....each	\$1.25
3½ inch	.....each	1.50
4 inch	.....each	1.65
4½ inch	.....each	1.80
5 inch	.....each	2.20
5½ inch	.....each	2.60

### SUPREME CEMENTLESS INNER TUBE PATCHES



The Supreme Inner Tube Patches are manufactured from very high grade, selected rubber, the back of the patch being molded and fully vulcanized. The face of the patch is raw gum, which is highly adhesive, and protected from the elements by Holland until ready for use. No cement is necessary in applying these patches. They have a fine beveled edge, and when once applied become an integral part of the tube. Five 1½" and five 2" patches in a can.

Per can .....each \$0.50

### SUPREME PATCHIT



Supreme Patchit is made from the best gums obtainable for the purpose. The upper layer is vulcanized and the lower is raw, quick-curing gum, protected by Holland until ready for use. It is a perfect patching material for tubes and makes a permanent repair without the use of a vulcanizer. You can readily repair from the smallest puncture to the largest blow-out without trouble.

No. 1. 36 sq. in.	.....each	\$0.50
No. 2. 108 sq. in.	.....each	1.00

# RACINE REPAIR MATERIAL

## RACINE REPAIR GUM IN BULK



### RACINE TUBE GUM

Racine Tube Gum is an uncured, very high quality, freely flowing gum, and should be used in conjunction with Racine combination gum.

- No. 27 Cures Gray.
- No. 28 Cures Red.
- No. 119 Cures Gray (Quick Curing).
- No. 269 Cures Red (Quick Curing).

#### Nos. 27-119 (Standard Gauge 1-32")

¼ lb. Air Tight Cartons.....	each	\$0.50
½ lb. Air Tight Cartons .....	each	.90
1 lb. Air Tight Cartons .....	each	1.75
5 lb. Rolls .....	lb.	1.60
10 lb. Rolls .....	lb.	1.60
25 lb. Rolls .....	lb.	1.60
50 lb. Rolls .....	lb.	1.60
100 lb. Rolls .....	lb.	1.60

#### Nos. 28-269 (Standard Gauge 1-32")

¼ lb. Air Tight Cartons .....	each	\$0.55
½ lb. Air Tight Cartons .....	each	1.00
1 lb. Air Tight Cartons .....	each	1.80
5 lb. Rolls .....	lb.	1.55
10 lb. Rolls .....	lb.	1.55
25 lb. Rolls .....	lb.	1.55
50 lb. Rolls .....	lb.	1.55
100 lb. Rolls .....	lb.	1.55

## RACINE COMBINATION TUBE GUM

Racine Combination Tube Gum is a high quality gum; one side semi-cured and the other side is uncured. This is for use on the under side of a damaged tube in conjunction with Racine Tube Gum.

#### No. 29 (Standard Gauge 3-64")

¼ lb. Air Tight Cartons .....	each	\$0.50
½ lb. Air Tight Cartons .....	each	.90
1 lb. Air Tight Cartons .....	each	1.75
5 lb. Rolls .....	lb.	1.60
10 lb. Rolls .....	lb.	1.60
25 lb. Rolls .....	lb.	1.60
50 lb. Rolls .....	lb.	1.60
100 lb. Rolls .....	lb.	1.60

## RACINE TREAD GUM

Racine Tread Gum is tough, durable and will flow nicely under heat in the vulcanizer.

- No. 23 Cures Black.
- No. 24 Cures Gray.
- No. 25 Cures White.
- No. 26 Cures Red.

#### No. 23 (Standard Gauge 1-16")

¼ lb. Air Tight Cartons .....	ea.	\$0.40
½ lb. Air Tight Cartons .....	ea.	.75
1 lb. Air Tight Cartons .....	ea.	1.40
5 lb. Rolls .....	lb.	1.30
10 lb. Rolls .....	lb.	1.20
25 lb. Rolls .....	lb.	1.10
50 lb. Rolls .....	lb.	1.10
100 lb. Rolls .....	lb.	1.10

#### Nos. 24-25-26 (Standard Gauge 1-16")

¼ lb. Air Tight Cartons .....	ea.	\$0.45
½ lb. Air Tight Cartons .....	each	.80
1 lb. Air Tight Cartons .....	ea.	1.40
5 lb. Rolls .....	lb.	1.40
10 lb. Rolls .....	lb.	1.30
25 lb. Rolls .....	lb.	1.20
50 lb. Rolls .....	lb.	1.20
100 lb. Rolls .....	lb.	1.20

## RACINE CUSHION GUM

Racine Cushion Gum is an uncured gum for use between the fabric body of the tire and the tread, and can be used either as a cushion gum or for the manufacture of cement.

#### No. 30 (Standard Gauge 1-32")

¼ lb. Air Tight Cartons .....	ea.	\$0.50
½ lb. Air Tight Cartons .....	ea.	.90
1 lb. Air Tight Cartons .....	ea.	1.75
5 lb. Rolls .....	lb.	1.60
10 lb. Rolls .....	lb.	1.60
25 lb. Rolls .....	lb.	1.60
50 lb. Rolls .....	lb.	1.60
100 lb. Rolls .....	lb.	1.60

## Racine Repair Gum in Cartons



Each article in the Racine Rubber Company's Sundry Line is manufactured from the highest grade of material obtainable for the purpose.

The most advanced manufacturing methods and extreme care in workmanship and finish make it a line worthy of the name it bears.

# RACINE BUILDING MATERIALS AND CEMENT

## RACINE BUILDING MATERIAL IN BULK



## RACINE BEAD COVER FABRIC

Racine Bead Cover Fabric is light weight, but very strong, and frictioned with high quality rubber gum, which does not dry out quickly and which will form a perfect adhesion to the fabric body of the tire.

No. 10 Bead Cover Fabric  
(Frictioned 2 Sides)

1 lb. Air Tight Cartons .....	ea.	\$3.50
5 lb. Rolls .....	lb.	3.25
10 lb. Rolls .....	lb.	3.25
25 lb. Rolls .....	lb.	3.25
50 lb. Rolls .....	lb.	3.25
100 lb. Rolls .....	lb.	3.25

## RACINE BUILDING FABRIC

Racine Building Fabric is strong and durable, having a very high tensile strength, and is frictioned throughout with high quality gum, giving it the long life and stick-to-itiveness which is so much desired.

No. 12—Frictioned 2 sides.

No. 16—Frictioned 2 sides; skim coat 1 side.

No. 18—Frictioned 2 sides; skim coat 2 sides.

No. 20—Frictioned and skim coat 1 side.

Furnished regularly.

1 lb. Air Tight Cartons .....	ea.	\$2.00
5 lb. Rolls .....	lb.	1.90
10 lb. Rolls .....	lb.	1.80
25 lb. Rolls .....	lb.	1.75
50 lb. Rolls .....	lb.	1.75
100 lb. Rolls .....	lb.	1.75

## RACINE CAMEL-BACK TREAD GUM



Racine Camel-Back Tread Gum will save shop time by eliminating the necessity of building up treads. It is properly formed as it comes to you, having a thick center with beveled edge. It is made of the same high quality rubber used in Racine tread gums, and of the correct dimensions for each size tire. Can be furnished in No. 23 Black Gum only.

No. 1—3½ inches wide, 3-16 inch thick.....	\$1.10
No. 2—4½ inches wide, 4-16 inch thick.....	1.10
No. 3—6 inches wide, 5-16 inch thick.....	1.10
No. 4—3½ inches wide, 9-32 inch thick.....	1.10

## RACINE BREAKER FABRIC

Racine Breaker Fabric is of a very strong, open weave, filled with a high quality adhesive rubber gum, acting as a shock absorber and distributor of road blows, protecting the body of the tire from concentrated strain.

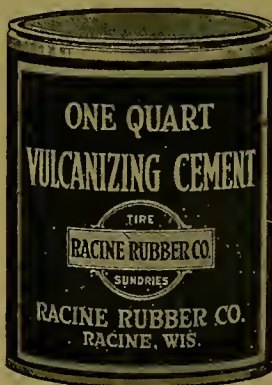
No. 14 Breaker Fabric  
(Frictioned & Skim Coat—2 Sides)

1 lb. Air Tight Cartons .....	ea.	\$1.60
5 lb. Rolls .....	lb.	1.55
10 lb. Rolls .....	lb.	1.45
25 lb. Rolls .....	lb.	1.40
50 lb. Rolls .....	lb.	1.40
100 lb. Rolls .....	lb.	1.40



Racine Building Material in Cartons

## RACINE VULCANIZING CEMENT



Racine Vulcanizing Cement is of the very highest grade, carefully and scientifically prepared.

Vulcanizing Cement

½ pt. can...ea.	\$0.20
¾ pt. can...ea.	.30
1 pt. can...ea.	.50
1 qt. can...ea.	.90
1 gal. pail...ea.	3.15
5 gal. cans...ea.	14.25
50 gal. bbls., gal.	2 65





## Velox Auto Cement

Velox auto cement is the highest grade of rubber patching cement. It is used where the best cement is required, viz., in patching inner tubes of automobile tires and in cementing together the ends of inner tubes; it has no equal for shop use.

$\frac{1}{8}$ -pt. cans, each .....\$0.15  
 $\frac{1}{4}$ -pt. cans, each ..... .25  
 $\frac{1}{2}$ -pt. cans, each..... .45  
 1 pt. cans, each..... .85



## Velox Rubber Putty

A preparation of pure rubber of the consistency of putty for repairing cuts and small holes in auto tires. Nothing better on the market. Easily applied.

$\frac{1}{4}$  lb. can, each....\$0.50



## Michelin Mastic

Nothing better made. Put up in wide mouth seal-top two ounce cans as illustrated.

2-oz. can. each ...\$0.40

## Velox Tire Tape



This tire tape is of special quality and suitable width. Is wrapped in tin foil and put up in screw top tin boxes for its proper preservation. Put up in rolls, 1 inch and  $1\frac{1}{4}$  inch in width. About 3 boxes to the pound.

1 in. width, per box .....\$0.25  
 $1\frac{1}{4}$  in. width, per box ..... .25

## Evergrip Tire Tape



Evergrip Fine Tape. Put up in carton box as per cut above. 16 rolls black to the pound.

Evergrip Black Tape. Put up in 2 oz.,  $\frac{1}{4}$  and  $\frac{1}{8}$  lb. rolls.

Price, per pound .....\$0.75

## Perma-Loc



It is the real remedy for punctures, cuts or tears in inner tubes. Once you cover the injury and put the tube to work, the repair is complete and made permanent, because the natural heat generated in the shoe vulcanized the patch to the tube perfectly.

To use patch all that is necessary is to clean the tube according to directions, apply a thin coating of cement, which is allowed to dry from one to three minutes, place the patch, and the tube is immediately ready for use. Comes in sheets, together with tube of cement put up in metal container. In four sizes.

Garage—	650 sq. in.....	\$6.00
A	—168 sq. in.....	1.50
B	—100 sq. in.....	1.00
C	—36 sq. in.....	.50

## French Talc



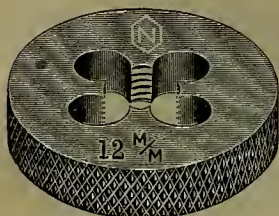
Talc sprinkled in the shoe before inserting tube, prevents friction and prolongs life of tire.

Packed 1 doz. cans to a carton.

1 per can, each .....\$0.15  
 10-lb. can, each ..... 1.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## TIRE SUNDRIES



## VALVE DIE

A very useful tool for re-threading outside of body of standard valves. With one of these dies in your equipment there should be no necessity for buying new valves.

Price, each .....\$0.65



## "THREE IN ONE" VALVE TOOL DROP FORGED

For recutting outside thread, tapping inside and removing valve from stem. Made in one piece from drop forging.

Price, each .....\$0.25



## "FOUR IN ONE" VALVE TOOL

The purpose of this tool is identical with the "Three in One," excepting that it has four cutting lips and a facing cutter with which rough surfaces may be removed from top of valves.

The embodiment of all that is requisite and desirable in Valve Tools. Uniform, strong, perfect.

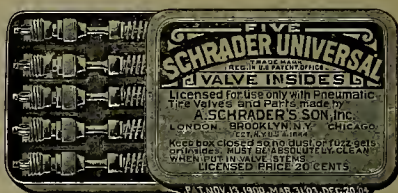
Price, each .....\$0.30

## "Tire Insurance for \$1.50



The Twitchell Gauge locks, showing true pressure or none.

Remove valve cap on tire stem and press the Twitchell Air Gauge over the tire valve for an instant. The indicator-bar locks at the pressure in the tire. This feature can not be found in any other gauge made. It absolutely prevents a slipping of the indicator, thus insuring accurate reading. You release it by a slight pressure of the thumb on the end of the bar.



Now come packed five to a tin box with sliding lid, making it convenient for carrying in the pocket or tool box.

Per box .....\$0.40

## SCHRADER VALVES

Each  
No. 777 3 inch Valve.....\$0.48  
No. 725 3 3/4 inch Valve......61  
No. 792 3 3/4 inch Valve......65

## SCHRADER PARTS

Schrader Valve Pts. Doz.  
No. 1 Caps .....\$0.85  
No. 2 Cap Washers......70  
Heavy Valve Caps, with Cut Threads

Price, per dozen.....\$0.96



## BUSHING FOR NO. 777 VALVE

Bushing is required on No. 777 valve in order to use dust cap.

Price, each ....\$0.05



Hexagon Rim Nut for 1822, 724, 967, 725 and 792 valves.

Price, each ....\$0.05

## DUST CAP FOR NO. 725 VALVE

Price, each .....\$0.12

## Schrader Universal Tire Pressure Gauge



This is the most accurate gauge on the market. The springs in same are made of a specially imported wire and are specially tempered. All gauges are thoroughly tested before shipping and are guaranteed to be accurate.

Each .....\$1.50

## Allen Tyrometer



will tell you instantly and accurately the amount of pressure by simply pressing it on the valve, and furthermore the indication is held by means of a sliding band, so as to give you an opportunity to read it. This is a very important feature, enabling the gauge to be used in the dark.

Each .....\$1.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# ALLEN TIRE COVERS



Style 1



Style WW



Style S. &amp; T.

The Allen Tire Case has a patented water-shed feature which makes it absolutely water-proof. The highest quality of enamel duck is used. Its strong canvas backing and non-peeling coating make it the best possible material for the purpose.

The constant demand for tire cases to match the body colors of cars has caused us to add to our extensive enamel duck line of Allen Tire Cases a variety of colors in a very high grade of Fabric Leather.

We will furnish samples on request.

## ENAMEL DUCK

Clincher, Demountable Rims and Wire Wheels.  
Black.

30-in. & 32-in.*	\$6.50
33-in. & 34-in.	7.00
35-in. & 36-in.	7.50
37-in. & 38-in.	8.00
Complete Wire Wheel Covers—All Sizes	10.00

## Johnston Demountable Rims.

For Pierce-Arrow Cars, All Sizes.....\$8.00

For new type Tire Holders—S & T style. 7.00

"Sides and Tread Only."

(Abbreviation "S & T")

30-in. & 32-in.	\$5.50
33-in. & 34-in.	6.00
35-in. & 36-in.	6.50
37-in. & 38-in.	7.00

Furnished in colors and also in Fabric Leather at extra cost. Prices on request.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## STYLE 1.

Our regular stock cover. Plain black enamel duck, which harmonizes with any car. We will also furnish Style 1 in any solid color shown in our samples at \$2.00 additional.

## STYLE 2

is made of enamel duck or fabric leather with the body of the case to match the color of the car, and the tread strips matching the trimming or running gear—or vice versa. To order only, from colors selected from our color swatch.

## STYLE 3

is our latest design—the last word in tire case style. Made in fabric leather or enameled duck of matching colors with beading to match trimming. To order only.

## SIDES AND TREADS ONLY.

(Abbreviation "S & T")

Designed to fit tires where special holders make other styles hard to put on.

Specify "Sides and Tread Only" on order.

## How to Order.

1—Size of tire used,—

2—(a) If car has tire holder requiring special special cover, give name of demountable rim,

or

(c) If for wire wheel, simply state wire wheel.

(d) If "Sides and Tread Only" Cover, simply state "S & T;"

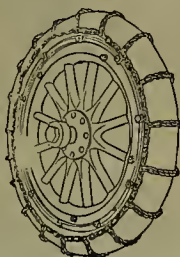
3—If color other than black, select color from our swatches.



## WEED CHAINS

Prevents Skidding Affords Traction Cannot Injure Tires

### Weed Anti-Skid Chains



represent the highest development of an anti-skid device. They are made as carefully as the automobile on which they are used, and, as you probably have often heard said, "Every Weed is Guaranteed." The cross chains are made of special stock and the links are smoothly welded. They are hardened in our own furnaces under pyrometer readings, and are then heavily brass plated. They are diamond-hard, yet not brittle, combining great strength and wearing quality. The Weed side chain is made of heavy wire of high tensile strength and is heavily galvanized to prevent rusting.

#### WEED CHAINS

Size	Per Pr.	Size	Per Pr.
28x2½	\$4.30	30x4½	\$8.15
30x2½	4.70	32x4½	8.65
28x3	5.00	33x4½	9.00
30x3	5.65	34x4½	9.30
32x3	6.20	35x4½	9.95
34x3	6.85	36x4½	9.95
36x3	7.50	37x4½	10.80
28x3½	5.65	38x4½	11.65
30x3½	6.20	40x4½	13.60
32x3½	6.85	42x4½	15.50
34x3½	7.50	34x5	10.40
36x3½	8.15	35x5	11.15
30x4	6.85	36x5	11.15
31x4	7.50	37x5	12.10
32x4	7.50	38x5	12.95
33x4	8.15	39x5	13.70
34x4	8.65	40x5	14.85
35x4	9.30	36x5½	14.85
36x4	9.30	37x5½	15.95
37x4	9.95	38x5½	17.25
40x4	12.30	38x6	17.25
		40x6	18.30

### Weed Cross Chains



Size	Per C	Size	Per C
2½	\$5.65	4½	\$11.70
3	6.75	5	14.05
3½	9.20	5½	17.80
4	10.30	6	21.55

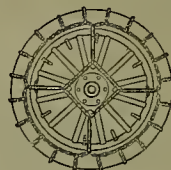
### Rid-O-Skid Tire Chains

are offered as an anti-skid device to meet the requirements of those to whom initial cheapness is the chief consideration. They are necessarily of inferior quality—are not made as carefully or of diamond-hard material as are Weed Tire Chains. If you ignore the maxim "Initial Cheapness is False Economy" and purchase Rid-O-Skid Chains instead of Weed Chains, you will at least be much wiser than the motorist who insists upon taking chances by "depending on rubber alone," and later experience will show you that Weed Chains give much greater mileage, and are, therefore, cheaper in the end.

#### RID-O-SKID CHAINS

Size	Per Pr.	Size	Per Pr.
28x2½	\$2.85	40x4	\$5.90
30x2½	3.10	30x4½	4.50
28x3	3.65	32x4½	4.80
30x3	3.75	34x4½	5.00
32x3	3.85	35x4½	5.20
34x3	4.15	36x4½	5.45
36x3	4.40	37x4½	5.75
28x3½	3.75	38x4½	6.10
30x3½	3.95	40x4½	6.75
32x3½	4.15	42x4½	7.90
34x3½	4.30	34x5	6.00
36x3½	4.50	36x5	6.50
30x4	4.15	37x5	6.75
31x4	4.40	38x5	7.05
32x4	4.50	39x5	7.35
33x4	4.60	40x5	7.70
34x4	4.80	36x5½	7.60
35x4	4.90	37x5½	7.90
36x4	5.10	38x5½	8.25
37x4	5.20	38x6	9.00
38x4	5.55	40x6	9.55

### Weed Chain Adjusters



Are four springs, radiating from a center chain surrounding the hub, are attached by simple hooks to the side chain. The Adjuster draws the Chains evenly to the tires—holds them right, fairly taut, but not tight. Allows the Chains to "creep," and that's the essential thing. When the Chains "creep" there isn't a ghost of a chance to cause injury to the tires.

28-30-32-34-36, per pair	\$1.30
37-38-40-42, per pair	1.90

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



# WEED CHAINS



## WEED CROSS CHAINS FOR SOLID TIRES

Single Solid		Dual Solid	
Size	Per C	Size	Per C
3 .....	\$11.05	3 .....	\$30.75
3½ .....	18.45	3½ .....	34.50
4 .....	23.35	4 .....	36.85
4½ .....	25.90	4½ .....	40.50
5 .....	29.50	5 .....	43.05
6 .....	32.20	6 .....	46.80
7 .....	36.75	7 .....	49.15

## WEED CHAINS FOR SOLID TIRES

An efficient traction and anti-skid device for Single and Dual Solid Truck Tires.

They are made especially strong and so constructed that they satisfactorily meet the requirements of heavy truck service.

### FOR SINGLE SOLID TIRES

Size	Per Pr.	Size	Per Pr.
32x3 .....	\$7.35	36x4½ .....	\$14.20
34x3 .....	8.00	38x4½ .....	15.30
36x3 .....	8.55	34x5 .....	15.30
38x3 .....	9.85	35x5 .....	16.60
40x3 .....	10.35	36x5 .....	16.60
30x3½ .....	8.65	37x5 .....	17.85
32x3½ .....	9.30	38x5 .....	17.85
34x3½ .....	10.40	39x5 .....	19.05
35x3½ .....	11.65	40x5 .....	20.25
36x3½ .....	11.65	41x5 .....	20.25
37x3½ .....	12.30	34x6 .....	16.05
38x3½ .....	12.30	35x6 .....	17.25
30x4 .....	10.40	36x6 .....	17.25
32x4 .....	11.00	37x6 .....	18.50
34x4 .....	12.30	38x6 .....	18.50
35x4 .....	13.50	39x6 .....	19.70
36x4 .....	13.50	40x6 .....	19.70
37x4 .....	14.65	41x6 .....	20.95
38x4 .....	14.65	42x6 .....	20.95
39x4 .....	15.95	36x7 .....	19.70
40x4 .....	15.95	38x7 .....	20.95
41x4 .....	17.15	39x7 .....	22.25
42x4 .....	17.15	40x7 .....	22.25
34x4½ .....	12.85	41x7 .....	23.35

### WEED CHAINS FOR DUAL SOLID TIRES

Size	Per Pr.	Size	Per Pr.
36x3 .....	\$15.30	36x4½ .....	\$20.25
38x3 .....	16.50	38x4½ .....	21.60
39x3 .....	17.85	40x4½ .....	22.80
41x3 .....	19.05	34x5 .....	19.70
34x3½ .....	17.20	35x5 .....	20.95
35x3½ .....	18.45	36x5 .....	20.95
36x3½ .....	18.45	37x5 .....	22.25
37x3½ .....	19.60	38x5 .....	22.25
38x3½ .....	19.60	39x5 .....	23.35
39x3½ .....	20.85	40x5 .....	23.35
40x3½ .....	20.85	41x5 .....	24.55
41x3½ .....	22.25	42x5 .....	24.55
34x4 .....	18.50	35x6 .....	23.35
35x4 .....	19.60	37x6 .....	24.55
36x4 .....	19.60	38x6 .....	25.90
37x4 .....	20.95	40x6 .....	25.90
38x4 .....	20.95	41x6 .....	27.10
39x4 .....	22.15	42x6 .....	27.10
40x4 .....	22.15	39x7 .....	28.15
41x4 .....	23.35	40x7 .....	28.15
42x4 .....	23.35	41x7 .....	29.55
34x4½ .....	19.10	42x7 .....	29.55

## “AMERICAN” EMERGENCY UNIT CHAINS



### FOR SINGLE AND DUAL SOLID TIRES

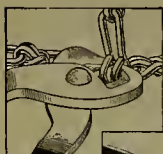
American Emergency Unit Chains are complete in themselves, requiring no expensive and troublesome attachments. No felloe plates, no spoke clamps which for other types of unit chains must be stocked in large assortments to fit the various sizes and shapes of spokes.

American Emergency Unit Chains are made to fit all sizes of single and dual solid tires.

Size	For Single Solid	For Dual Solid
	Tires	Tires
3 .....	\$0.65	....
3½ .....	.70	\$0.90
4 .....	.75	1.10
5 .....	.85	1.20
6 .....	.95	1.40
7 .....	1.05	1.60

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## Weed Chain Pliers

Opening  
the  
HookClosing  
the  
Hook

Patented July 29, 1913

Will fit either old or new style links. Drop forged semi-finished black handle. Very strong and will do what it is made for: Repair tire chains easily and quickly.

Price, each .....\$0.60

## Necessity Chain Pliers



With this new tool anyone can readily take out and replace broken cross links in tire chains, without removing the chain or jacking up the car. In half an hour it will take out and replace a full set of cross chains—work that cannot be done in any other way in less than half a day.

Each .....\$1.75

## Emergency Mud Hook



When everything else fails, one of these hooks on each wheel will help a car out of any emergency that is caused by mud, sand or snow.

The attaching is done when the wheels are in deep mud, whereas chains can only be of service, if fastened before the trouble arises. They are very strong and will stand rough usage. As soon as the car is free, take them off. Every tourist should carry a set of two.

Furnished in three different sizes: No. 1 for 3 and 3½ inch tires; No. 2 for 4 and 4½ inch tires; No. 3 for 5, 5½ and 6 inch tires. Should the projecting lug in any case be too long it can easily be filed or cut off with a back saw.

Price, per pair, any size, with four straps.....\$1.50

Price, per pair, without straps.....1.00


## Tire Tools



No. 5

Very necessary in applying and removing quick detachable and clincher tires. Made of malleable iron, aluminum finish.

No. 5. Price, each .....\$0.65

No. 4 No. 3 No. 2 No. 6 No. 1 

No. 4. Tire iron. 8 inches long. Aluminum finish.  
Price, each .....\$0.20

No. 3. Tire iron. A very useful tool. 11 inches long.  
Price, each .....\$0.40

No. 2. Tire iron. 13 inches long. Aluminum finish.  
Price, each .....\$0.35

No. 6. Tire iron. 12 inches long. Aluminum finish.  
Price, each .....\$0.35

No. 1. Tire iron. 16½ inches. Aluminum finish.  
Price, each .....\$0.50

## Tire Jimmy



Length, 16½ in. Hand forged from 1¼ x 9-16 in. round edge steel. Most convenient for putting tires on new wheels, as it does the work quickly and without injury to the enamel. On account of its strength and convenient proportions this tool will serve many other useful purposes around the shop.

Each .....\$0.40

## Tire Display Stand



The best and cheapest method for advertising and selling tires. A silent salesman which will result in increased sales. Use them in showrooms and windows.

Grips and holds all sizes of tires from 3 inches to 6 inches with or without a rim. There are no screws or clamps to adjust. It is simple, durable and "fool-proof." A glance at the cut will convince you of this.

Each .....\$2.25

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# TIRE HOLDERS



**"HERCULES" REAR END TIRE AND DEMOUNTABLE RIM HOLDER**



**"HERCULES" REAR END HOOK**

This holder is the most practical and strongest rear end tire holder ever devised. (Without excess weight). Can be attached to practically any type of car and is capable of carrying either one or two of the heaviest demountable rims.

The set consists of a combination of two strong substantial hooks which are firmly bolted to the rear end of the frame. This is the only point where it is necessary to attach this holder to the car.

Two  $\frac{3}{4}$  inch solid steel supporting arms, surmounted by two strong adjustable terminals, extend from holes through the hooks close to the frame. These arms are adjustable, both at the top and bottom, to accommodate the size of the tire and the shape of the rear end of the body and, together with the shoes, hold the tires or demountable rims rigidly in place. Black enamel finish.

No. 73. Complete with straps—7-inch drop. Price, per set .....\$6.00

No. 74. Complete with straps—9-inch drop. Price, per set ..... 6.00

This supporting Hook is exceptionally strong (without excess weight). Can be attached to practically any type of car and is capable of carrying either one or two of the heaviest demountable rims. It is composed of two strong supporting hooks, which are firmly bolted to the rear of the frame. Resting on and attached to these hooks are two large, perfectly curved tire shoes, into which the tires fit snugly without chafing or injuring them in any way.

Made in 7 and 9 inch drops, measuring from the plane of the lower edge of the frame of the gear down to the point where the tire rests. Finished in hard rubber black enamel.

No. 78. Complete with straps, 7 inch drop. Each..\$5.00

No. 79. Complete with straps, 9 inch drop. Each.. 5.00



**RUNNING BOARD TIRE AND DEMOUNTABLE RIM HOLDERS**

Especially adapted for four door cars. Contained entirely on the running board, obviating the necessity of drilling any holes or marring the body of the car. Equipped with four folding hinge clips, accommodating either one or two tires or demountable rims. Furnished with hard rubber black enamel.

Price

No. 7. For 4 in. tires, 4 straps, per set.....\$4.00

No. 18. For 4½ in. tires, 4 straps, per set..... 5.00

**FORD OR SMALL CAR RUNNING BOARD TIRE HOLDERS**

No. 28. For 1 or 2 tires. Complete with straps. Per set .....\$2.50



**"ROADSTER" REAR END TIRE AND DEMOUNTABLE RIM HOLDER**

This tire holder is designed especially for roadsters. It consists of a substantial hook which is bolted firmly to the cross member of the frame. Extending outward and upward from holes through the hook, close to the frame are two solid steel supporting arms, surmounted by neat, attractive terminals accommodating either one or two tires. The lower hook is made in 7 and 9 inch drops. The entire tire holder finished in black enamel. Weight, packed in carton, 12 lbs.

No. 75. Complete with straps, 7 in. drop .....\$3.25

No. 76. Complete with straps, 9 in. drop ..... 3.25

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## FIRESTONE DEMOUNTABLE RIMS

Built by a tire maker. They are designed from the standpoint of the tire maker's knowledge of what a rim should be in order that the longest tire service and surest ease of operation may be obtained.

Two types of rims fitting same felloe band with identical demounting feature.

Cannot bend or squeak under weight of car. Continuous support under car.

Made in plain clincher, straight side, continuous and split types.

TYPE B



Type B—Universal.

Type C—Fits any straight side tire.

Type E—One-piece split rim, fits any straight side tire.

Type F—One-piece clincher rim.



Be sure that valve sleeve sent out with every set of rims is used.

This is an important feature of this rim as it serves to hold steel valve spreader (L) securely in place, making it impossible to throw a tire even when deflated. Prevents moisture from working into the tire around the valve stem, and the dust cap need not be removed when the rim is mounted or demounted.

TYPE C



### ACCESSORIES PRICE LIST FOR 3½ IN., 4 IN., 4½ IN. B C & E RIMS

	Prices
Clamps .....	\$0.10
Clamp Brackets .....	.01
Screws (1 box) .....	.20
Bolts—all sizes .....	.07
Nuts .....	.04
Washers .....	.02
Rim Dowels .....	.10
Valve Sleeves .....	.07
Cam Buttons .....	.10
Latches for "E" Rims .....	.20
Socket Wrench .....	.60
Split Rim Tool (3½ in. and 4 in.) .....	.95
Split Rim Tool (4½ in.) .....	1.25

### TRUCK TYPE PNEUMATIC EQUIPMENT 6 IN., 7 IN., 8 IN., 10 IN. TYPE "C" RIMS

Size	Per Set	Spare Rim
36x6 "C" .....	\$92.00	\$12.80
38x7 "C" .....	102.00	14.70
40x8 "C" .....	127.00	18.40
44x10 "C" .....	187.50	27.40

#### Rim Base

	Prices
36x6 .....	\$8.65
38x7 .....	10.50
40x8 .....	13.15
44x10 .....	17.33

#### Side Rings

36x6 .....	\$2.70	40x8 .....	3.80
38x7 .....	2.75	44x10 .....	8.62

#### Locking Rings

6 in., 7 in., 8 in., 10 in. .....	1.45
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#### Clamping Rings

6 in., 7 in., 8 in. .....	.51
10 in. .....	.56

#### Felloe Bands

36x6 .....	3.68	40x8 .....	5.00
38x7 .....	3.70	44x10 .....	7.54

### ACCESSORIES PRICE LIST FOR 6 IN., 7 IN., 8 IN., 10 IN.

Bolts, 6 in.-7 in. ....	\$0.10	Nuts .....	\$0.05
Bolts, 8 in. ....	.105	Clamps .....	.15
Bolts, 10 in. ....	.21	Back Washers .....	.029
Valve Sleeves .....			.068
½ in. "T" Handle Wrench .....			.58

### COMPLETE EQUIPMENT FOR FOUR WHEELS AND ONE SPARE RIM INCLUDING SOCKET WRENCH

Size	Type	Per Set	Extra Spare Rim
30x3½ "F" .....		\$20.50	\$2.60
32x3½ "E" .....		25.00	3.60
32x4 "C" .....		35.00	5.35
32x4 "E" .....		25.85	3.90
33x4 "C" .....		35.75	5.50
33x4 "E" .....		26.50	4.00
*34x4 "C" .....		36.75	5.80
*34x4 "E" .....		27.10	4.20
32x4½ "E" .....		31.50	4.50
32x4½ "C" .....		38.25	5.90
*34x4½ "B" .....		44.00	7.00
34x4½ "C" .....		40.50	6.30
34x4½ "E" .....		31.00	4.75

\*Note:—Size 34x4, Type "E" and "C," and size 34x4½, Type "B," will become obsolete during 1919.

### PARTS LIST PNEUMATIC RIMS

Size	Side Rings	Prices
4 in. ....		\$1.10
4½ in. ....		1.30
Lock Rings		
4 in. ....		1.00
4½ in. ....		1.20
Clamp Rings		
3½ in., 4 in., 4½ in. ....		.50
Felloe Bands		
3½ in. ....		1.20
4 in. ....		1.45
4½ in. ....		1.65

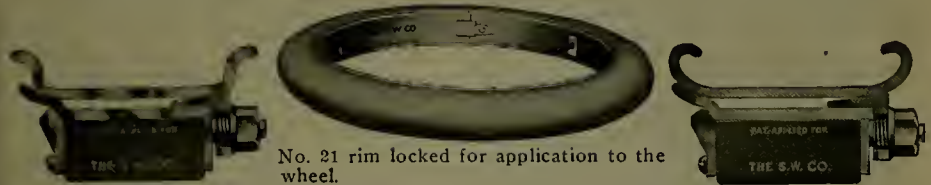
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## STANWELD RIMS

Simplicity and ease of operation are the qualities that have made Stanweld Rims the most popular rims on the market. You will find few rims as light in weight which give the service obtainable from Stanweld rims. They are safe rims, because they are exceptionally well made, of the highest grade steel, each lot tested both chemically and physically.

### STANWELD RIMS SERIES No. 20



No. 21 rim locked for application to the wheel.

No. 21 for Straight Side Tires only. No. 22 for Q. D. and Reg. Clincher Tires.

A transversely split, very light and easy to operate, demountable rim, used by the leading car manufacturers as standard equipment. Is made in Straight Side or Clincher type and will fit on Continental or No. 3 type Felloe Band, without making any wheel changes.

### STANWELD No. 76

The new standardized demountable rim, containing all the features of the No. 21 Rim, and in addition conforming to recently adopted rim standards.

Series No. 20 and No. 76

Set complete consisting of 4 felloe bands, 5 rims and all necessary parts.

Size and Type		Price Per Set	Spare Rim Price Each	Felloe Bands Price Each
30 x 3½	Plain Clincher Demountable.....	\$27.60	\$3.00	\$1.90
32 x 3½	Straight Side or Clincher.....	35.52	4.20	2.10
32 x 4	Straight Side or Clincher.....	36.90	4.50	2.30
34 x 4	Straight Side or Clincher.....	38.70	5.10	2.45
36 x 4	Straight Side or Clincher.....	40.50	5.70	2.65
32 & 34 x 4½	Straight Side Only .....	45.00	6.00	2.80
32 & 34 x 4½	Clincher Only .....	47.70	6.60	2.80
36 x 4½	Straight Side Only .....	46.80	6.30	2.95
36 x 4½	Clincher Only .....	49.50	6.90	2.95

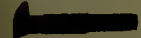
No. 118



No. 126



No. 120



No. 5



### SPARE PARTS FOR STANWELD RIMS

	Each
Part No. 5. Wedge Plate .....	\$0.07
Part No. 125. Driving Stud .....	.10
Part No. 144. Key Lock .....	.20
Part No. 118. Brace for all sizes and types .....	1.00
Part No. 126. Wedge for No. 76 Rim .....	.25
Part No. 121. Wedge for S.S. Rim, Series 20.....	.25
Part No. 121. Wedge for Clincher Rim, Series 20.....	.25
Part No. 120. Bolt, three sizes—3½ in., 4 in., 4½ in....	.15
Part No. 122. Cam Latch and Rivet .....	.20
Part No. 123. Turnbuckle Detaching Tool .....	1.20

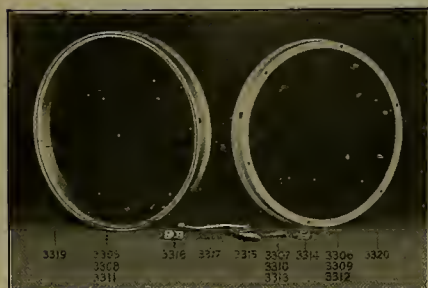
Note.—When ordering rims state size of tire, make and year of car and whether straight side or Clincher type is wanted. Order parts by number. This will insure prompt and efficient service.



No. 76 Rim

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## KELSEY DEMOUNTABLE RIMS



### KELSEY NO. 30 RIMS

Size and Type	Spare Rims		Felloe Bands	
	Each	Stock No.	Each	
32x3½ SS	\$4.25	E51	\$3.60	
32x3½ CI	4.25	E51	3.60	
34x4 SS	5.10	E56	4.30	
34x4 CI	5.10	E56	4.30	

The Kelsey No. 30 is our latest improved type of Demountable Rim, and is made for straight side as well as clincher type tires, as tire rims are interchangeable on the same felloe band.

Quick and easy of operation, as the loosening of four nuts, and the half turning of four wedges on their bolts (not touching the two on either side of valve stem) permits of the immediate demounting of the rim and tire from wheel.

Rim is of the split type, and is easily taken from the tire, a screw driver being the only tool necessary, and that only to get the rim started.

Any straight side tire will fit this new rim.

Parts List		Each
32x3½ in. Felloe Bolts, 7-16 x 2	11-16 in.	\$0.25
34x4 in. Bolts, 7-16 x 3		.25
Wedge and Nuts		.30

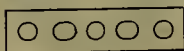
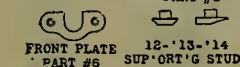
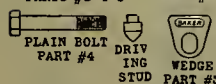
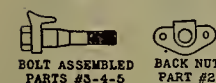
## BAKER DEMOUNTABLE RIMS

With Baker Demountable Rims it is only necessary to loosen three of the five wedges, not molesting those two (one on either side of the valve stem).

Jack up the wheel, remove the damaged tire and Baker Rim; then mount your spare rim, carrying the ready, inflated spare tire on the wheel. Let your car off the jack, tighten the three bolts, and you are ready to drive away. There is no delaying, no pumping of air, or other hard work. The simplest, most efficient demountable rim on the market.



### Baker Rim Parts



	Spare Rims		Felloe Bands	
	Each	Stock No.	Each	
30x3½ SS	\$4.25	A50	\$1.90	
30x3½ CI	3.00			
32x3½ SS	4.25	A51	2.10	
34x3½ SS	4.40	A55	2.15	
34x3½ SS	4.46	A55	2.15	
34x3½ CI	4.60	A55	2.15	
36x3½ SS	4.50	A510	2.20	
36x3½ CI	4.70	A510	2.20	
32x4 SS	4.40	A52	2.25	
32x4 CI	4.60	A56	2.25	
34x4 SS	5.05	A56	2.40	
34x4 CI	5.25	A58	2.60	
36x4 SS	5.40	A58	2.60	
36x4 CI	5.70	A57	2.75	
34x4½ SS	6.00	A57	2.75	
34x4½ CI	6.40	A59	2.90	
36x4½ SS	6.30	A59	2.90	
36x4½ CI	6.70	A511	2.90	
36x5 SS	7.00	A511	2.90	
36x5 CI	7.70	A512	3.05	
38x4½ CI	7.00			

### ORDER SMALL PARTS FOR BAKER RIMS BY NUMBER.

#### BAKER RIM PARTS

Nuts Part No. 2	\$0.20 each
Bolts, Comp., Nos. 3, 4, 5 (state size)	.40 each
Plain Bolts, Part No. 4 (state size)	.20 each
Wedges Part No. 3	.18 each
Side Plates Part No. 6	.10 each
Anchor Plates	.20 each

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## RIM PARTS



## WEDGES AND CLAMPS

No.	Rim Used With.	Used with Bolt No.	Price Each
1-C	Clamp, Kelsey No. 100	9	\$0.35
2-C	Clamp, Baker No. 117	8	.15
3-W	Wedge, Baker Regular	4	.18
4-W	Wedge, Detroit	7	.25
5-W	Wedge, Stanweld	7	.35
6-W	Wedge, Perlman-Jaxon	7	.25
6-BW	Wedge, Perlman-Jaxon	7	.25
8-W	Wedge, Prudden	7	.25
9-W	Wedge, Jaxon	7	.25
10-W	Wedge, Firestone	8	.12
11-C	Clamp, Firestone	8	.12
12-W	Wedge, Kelsey No. 75, 30x3 1/2	7	.30
13-C	Kelsey Cadillac	6	.35
14-W	Wedge, Kelsey No. 30, narrow	9	.35
15-W	Wedge, Kelsey No. 30, wide	9	.35
16-C	Clamp, Kelsey No. 77, 30x3 1/2	7	.35
17-A	Assem., Baker Assembly		.40
18-W	Wedge, Dodge Rim, 1918	7	.35
19-C	Clamp, Goodrich	5	.35
20-C	Clamp, Parker	2	.15
21-W	Wedge, Goodyear	8	.15

## BOLTS AND NUTS

Bolt No.	Price each
2. 2A for 3 1/2 in., 2B for 4 in. rims.	\$0.20
Used with Nut No. 4N.	.06
4. 4B for 3 1/2 in., 4C for 4-4 1/2 in. rims.	.20
Used with Nut No. 2N.	.20
5. 5A for 3 1/2 in., 5C for 4-4 1/2 in. rims.	.30
Used with Nut No. 12N	.08
6. 6C for 4-4 1/2 in. rims.	.15
Used with Nut No. 8N	.10
7. 7B for 3 1/2 in., 7C for 4 in., 7D for 4 1/2 in. rims.	.15
Used with Nut No. 10N	.06
8. 8A for Baker 117, 8B for 3 1/2 in., 8C for 4 in. and 8D for 4 1/2 in. rims.	.10
Used with Nuts Nos. 4N-6N	.06
9. 9B for 3 1/2 in., 9C for 4 in., 9D for 4 1/2 in. rims.	.15
Fits Kelsey Nos. 30 and 100	
Used with Nut No. 8N	.10

## Trex Rim Compressor

The Trex Rim Compressor is a device for removing and replacing tires on demountable rims of the split type. It is built to stand the most critical test. The long handle reduces physical exertion necessary to change tires to a minimum, and in addition, you do not have to get down into grime and dirt, but can stand erect, and more quickly than it takes to tell it you can change your tires.

It is self adjustable to any size rim, and is therefore very practicable.

It works like a jack and is therefore very simple in operation.

Made of malleable iron, it is very durable.

Does not injure rim or spring it out of shape.

When closed occupies small space and can be carried in tool box. (Note illustration on left).

To use: Let air out of tire and unlock rim. Place the hook at front end over rim 4 or 5 inches from split (as illustrated at right), then place straight across rim, hooking rear end on the rim. Place the dog of the handle in its forward position and rear dog in engagement with pinion and the forward dog in neutral position; work handle back and forth till rim is collapsed to desired distance, so the tire can be easily taken off. You can

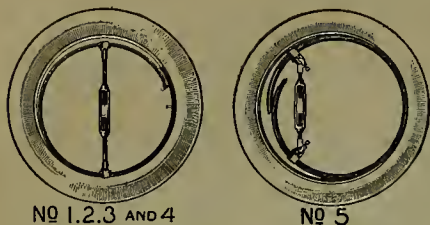
now remove your tire, the device will hold the rim collapsed. You can't shake it off.

To expand rim reverse operation; reverse dog on handle to rear position; place rear dog in neutral position and front dog in engagement with pinion; work handle back and forth until rim goes back in place. It will go back even if it has a kink in it.

Price, each ..... \$6.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.





NO 1,2,3 AND 4

NO 5



NO 1,2,3 AND 4

NO 5

- No. 1—for 32-34 x 3½ in. straight side or 4 in. clincher .....\$2.00  
 No. 2—for 34 x 4 in. straight-side or 4½ in. clincher ..... 2.00  
 No. 5—Works across split in rim..... 2.50

### The Utility Universal Rim Wrench



A WHOLE TOOL KIT IN ONE specially designed for removing all nuts used in connection with all kinds of demountable rims, but can be utilized for many other purposes.

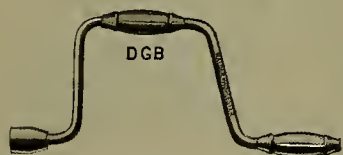
It is really a socket wrench set in itself. It adjusts itself automatically.

This wrench can be used with both hands. It operates as does a hit brace and the operator can exert tremendous pressure.

It can be folded when not in use and carried in the tool box.

Each .....\$1.75

### Walden Rim Wrench



DGB

This is the popular tool for use on rims. The only all steel brace on the market. The swivel handles are pressed steel, the wrench is nickel finish.

You can buy cheaper tools, but the best is none too good for this emergency work.

Look for the name WALDEN-WORCESTER on all wrenches.

Sizes to fit all standard rims carried in stock.

5-8 in. Kelsey-Booth, 11-16 in. Firestone and Fisk Dem.

¾ in. Baker, Continental, Detroit, Fisk tires and No.

3-30-21-22 Stanweld.

13-16 in. No. 2 Universal, No. 40-60 Stanweld.

Each .....\$1.00

### Best Rim Contractor-Expander.

A Rim Tool that makes tire changing easy.

For removing tires from clincher and straight side demountable rims.

This tool both expands and contracts the rim—eliminates all hard work in tire changing.

When held contracted, you place your safety flap without a wrinkle.

We recommend the Nos. 1, 2, 3 and 4 types for rims where the valve stem comes at the split, and there are a great many rims of this type. The large tool allows a little more freedom and opportunity to swing one end of the rim out past the valve stem, while with the smaller No. 5 tool the rims are held in line pretty rigidly.

No. 3—for 36 x 4½ in. and 5 in. straight side or clincher .....\$2.00

No. 4—Special Tire Shop Tool—can be used on all sizes ..... 2.50

### Mossberg Ratchet Wrench



No. 358

Made of the very best material finely finished. The Ratchet Brace Wrench is fast taking the place of other rim tools on account of speed and accuracy. Length 12½ inches, width or throw 5 inches.

Each .....\$2.25

### Mossberg Rim Wrench



Made of finest steel, bright finish, wood handle and 14 inches over all with Guaranteed Pressed Steel Sockets.

No. 361 Brace Wrench, 11-16 in. hex. opening.

No. 362 Brace Wrench, ¾ in. hex. opening.

No. 363 Brace Wrench, 13-16 in. hex. opening.

Any size, each .....\$0.79

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## BRUNNER GARAGE AIR COMPRESSORS

The BRUNNER line of Air Compressors is the most complete high grade line of this Garage Equipment on the market, and in recommending it, we do so with the utmost confidence that any BRUNNER Compressor will render satisfactory service when properly installed.

Every BRUNNER Air Compressor has three metal Piston Rings in each Piston, and every Cylinder, Piston and Piston Ring is accurately ground to perfect fit, insuring maximum efficiency and great durability.

The entire line is manufactured with a degree of care and excellence that enables us to guarantee these machines in every particular, in which we are backed up by the manufacturers.

Your Garage Equipment is not complete without a BRUNNER.



### No. 100 BELT DRIVEN AIR COMPRESSOR

As far as we know, this is the only practical, high-grade Air Compressor of very small capacity for small garages.

Recommended for garages housing up to 20 cars and to be used in connection with air tanks not larger than 20 gal. capacity for best practical service. Built for pressures up to 175 lbs., but tested at the factory to 300 lbs. pressure.

Has adjustable safety valve. Requires  $\frac{1}{4}$  H.P. for operation and delivers 1 cu. ft. free air per minute, at 350 R.P.M.

Should be operated between 350 and 400 R.P.M.

Height  $4\frac{1}{2}$  inches. Floor space  $8 \times 11$  inches. Net weight 23 lbs. Shipping weight 30 lbs.  
Price—No. 100, with 8 inch T. & L. Pulleys.....\$22.00

### Belt Driven Garage Outfit No. 2

For Garages housing 15 to 20 cars and Vulcanizing Shops

1—No. 100 Belt Driven Compressor, 8 in. T. & L. Pulleys.....	\$22.00
1—20 Gal. 14 in. x 30 in. Galvanized Air Tank .....	20.00
1—Model "B" Air Gauge .....	2.50
1—No. 75 Vertical Check Valve .....	1.60
1—No. 72 Safety Valve for Air Tank .....	2.50
1—No. 83— $\frac{1}{4}$ in. Needle Valve .....	1.60
1—No. 83— $\frac{3}{8}$ in. Needle Valve .....	1.60
1—No. 82— $\frac{3}{8}$ in. Needle Valve with Swivel Hose Connection .....	1.90
2—Specially Ground Brass Unions, $\frac{1}{4}$ in. and $\frac{3}{8}$ in.....	1.50
1—Automatic Tire Connection .....	1.00
1—25 ft. Drop Line 3-16 in. "Resistol" Air Hose.....	4.25

\$60.45

### No. 101 BELT DRIVEN AIR COMPRESSOR

A small vertical Compressor of high quality for small garages housing up to 25 cars and for vulcanizing shops.

Suitable for pressures up to 175 lbs. and tested to 300 lbs. at the factory. Should be used with air tanks of 24 gal. capacity or less.

Has adjustable safety valve.

Requires 1-3 H.P. for operation and delivers  $1\frac{1}{4}$  cu. ft. free air per minute at 350 R.P.M.

Height 13 in. Floor space  $6\frac{1}{2} \times 9$  in. Net weight 28 lbs. Shipping weight 42 lbs.

#### Prices.

No. 101, with 8 inch Tight Pulleys only .....	\$26.50
No. 101, with 9 inch T. & L. Pulleys.....	30.00
No. 101, with 14 inch Tight Pulley only .....	28.50
No. 101, with 9 inch Pulley and Clutch (as illustrated).....	32.00

### Belt Driven Garage Outfit No. 3

For Garages housing 20 to 25 cars and Vulcanizing Shops

1—No. 101 Belt Driven Compressor, 9 in. T. & L. Pulleys.....	\$30.00
1—26 Gal. 16 in. x 30 in. Galvanized Air Tank .....	27.00
1—Model "B" Air Gauge .....	2.50
1—No. 75 Vertical Check Valve .....	1.60
1—No. 72 Safety Valve for Air Tank .....	2.50
1—No. 83— $\frac{1}{4}$ in. Needle Valve .....	1.60
1—No. 83— $\frac{3}{8}$ in. Needle Valve .....	1.60
1—No. 82— $\frac{3}{8}$ in. Needle Valve with Swivel Hose Connection .....	1.90
2—Specially Ground Brass Unions, $\frac{1}{4}$ in. and $\frac{3}{8}$ in.....	1.50
1—Automatic Tire Connection .....	1.00
1—25 ft. Drop Line 3-16 in. "Resistol" Air Hose.....	4.25

\$75.45

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## No. 102 TWO-CYLINDER BELT DRIVEN AIR COMPRESSOR



This is the standard Air Compressor for garage service and will deliver more air and higher pressure with less power than any other compressor of equal rating on the market.

We recommend this machine for garages housing up to 60 cars and to be used with air tanks up to 50 gal. capacity.

Requires  $\frac{1}{2}$  H.P. for operation; delivers 3 cu. ft. free air per minute at 400 R.P.M. and 175 lbs. pressure. Tested to 300 lbs.

Adjustable safety valve on each cylinder.

Net weight 38 lbs. Shipping weight 46 lbs.

Height 13 inches. Floor space  $6\frac{1}{2}$  x 10 inches.

### Prices.

No. 102 Compressor with 9 inch Tight Pulley only.....	\$39.50
No. 102 Compressor with 9 inch T. & L. Pulleys.....	44.00
No. 102 Compressor with 14 inch Tight Pulley only.....	41.00
No. 102 Compressor with 9 inch Pulley and Clutch (as illustrated) .....	47.00

## BELT DRIVEN GARAGE OUTFIT NO. 1

For Garages housing up to 60 cars and large Vulcanizing Shops

1—No. 102 Belt Driven Air Compressor, 9 in. T. & L. Pulleys .....	\$44.00
1—50 Gal. 16 in. x 60 in. Galvanized Air Tank .....	38.00
1—Model "B" Air Gauge .....	2.50
1—No. 75 Vertical Check Valve .....	1.60
1—No. 72 Safety Valve for Air Tank .....	2.50
1—No. 81— $\frac{1}{4}$ in. Needle Valve .....	1.60
1—No. 82— $\frac{1}{4}$ in. Needle Valve .....	1.60
1—No. 82— $\frac{3}{8}$ in. Needle Valve with Swivel Hose Connection .....	1.90
2—Specially Ground Brass Unions, $\frac{1}{4}$ in. and $\frac{3}{8}$ in. ....	1.50
1—Automatic Tire Connection .....	1.00
1—25 ft. Drop Line 3-16 in. "Resistoil" Air Hose.....	4.25

\$100.45

## No. 17 TWO-CYLINDER BELT DRIVEN

This Compressor has two cylinders, 3 x 3 inches, is water cooled and built for the most severe service. This machine is absolutely dependable under all conditions, being of the most rigid construction throughout, and having many unique features not embodied in any other compressor.

We recommend this Compressor for garages housing up to 150 cars and having more than one floor, requiring a large number of service lines and with tanks up to 120 gal. capacity.

Capacity  $9\frac{1}{4}$  cu. ft. free air per minute at 400 R.P.M. Pressures up to 175 lbs. and requires  $1\frac{1}{2}$  H.P. for operation.

Height 18 inches. Floor space  $8\frac{3}{4}$  x 15 inches.

Has cast iron sub-base for mounting.

Net weight 190 lbs. with T. & L. Pulleys. Shipping weight 225 lbs.

### Prices.

No. 17 Compressor with one 16 inch Flywheel Pulley .....	\$117.00
No. 17 Compressor with 16 inch T. & L. Pulleys.....	125.00

## BELT DRIVEN GARAGE OUTFIT NO. 4

For Garages and Service Stations housing 75 to 100 cars

1—No. 17 Water Cooled, Belt Driven Compressor, 16 in. T. & L. Pulleys .....	\$125.00
1—80 Gal. 18 in. x 72 in. Galvanized Air Tank.....	70.00
1—Model "B" Air Gauge .....	2.50
1—No. 76 Vertical Check Valve .....	2.75
1—No. 72 Safety Valve for Air Tank .....	2.50
1—No. 84— $\frac{1}{4}$ in. Needle Valve .....	2.75
1—No. 83— $\frac{3}{8}$ in. Needle Valve .....	1.60
1—No. 82— $\frac{3}{8}$ in. Needle Valve with Swivel Hose Connection .....	1.90
2—Specially Ground Brass Unions, $\frac{1}{4}$ in. and $\frac{3}{8}$ in. ....	2.00
1—Automatic Tire Connection .....	1.00
1—25 ft. Drop Line 3-16 in. "Resistoil" Air Hose.....	4.25

\$216.25

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## BRUNNER MOTOR DRIVEN AIR COMPRESSORS

## No. 42 MOTOR DRIVEN COMPRESSOR

This Compressor is intended for service in garages housing up to 60 cars and in connection with tanks up to 50 gal. capacity.

The Compressor has a capacity of  $2\frac{1}{2}$  cu. ft. of free air per minute, has an adjustable safety valve on each cylinder and is driven by  $\frac{1}{2}$  H. P. motor, by noiseless rawhide pinion gear. The motor will readily start the compressor against 130 lbs. and drive it up to 175 lbs.

Makes a most convenient installation when used in connection with our Model "M" Automatic Controller. Operation from lighting circuit if desirable.

Height, 16 $\frac{1}{2}$  in. Floor space, 18 $\frac{3}{4}$  x 11 in.  
Net weight 170 lbs. Shipping weight 200 lbs.

## PRICES

With 110 or 220 V. 60 cy. A. C. 1 Phase Motor.....\$165.00  
With 110 or 220 V. Direct Current Motor..... 150.00

A. C. Motors for other than 60 cycle at slight additional charge.

## Motor Driven Garage Outfit No. 6

For Garages housing 75 cars, when Model "M" Controller is used and up to 50 cars without Model "M."

1—No. 42 Motor Driven Compressor, 110 or 220 V. 60 Cy. A. C. ....	\$165.00
1—40 Gal. 16 in. x 48 in. Galvanized Air Tank.....	35.00
1—Model "B" Air Gauge .....	2.50
1—No. 75 Vertical Check Valve .....	1.60
1—No. 72 Safety Valve for Air Tank .....	2.50
1—No. 83— $\frac{1}{4}$ in. Needle Valve .....	1.60
1—No. 83— $\frac{3}{8}$ in. Needle Valve .....	1.60
1—No. 82— $\frac{3}{8}$ in. Needle Valve with Swivel Hose Connection .....	1.90
2—Specially Ground Brass Unions, $\frac{1}{4}$ in. and $\frac{3}{8}$ in. ....	1.50
1—Automatic Tire Connection .....	1.00
1—25 ft. Drop Line 3-16 in. "Resistoil" Air Hose.....	4.25
1—Model "M" Controller to make outfit automatic (Optional) .....	\$218.45
	30.00
	<b>\$248.45</b>

## THE NO. 66 PORTABLE TIRE INFLATOR

This is a well built Motor Driven Portable Outfit for inflating tires without a storage tank, and operates from any lighting circuit.

Has a heavily built Two-Cylinder Air Cooled Compressor, each piston equipped with three metal rings, and geared to a  $\frac{1}{4}$  H.P. Electric Motor by means of a cloth pinion, and mounted upon a substantial cast iron sub-base with three wheels. A substantial handle of convenient height is supplied.

Beautiful gloss black enamel finish. 20 ft. electric cord and plug and 20 ft. heavy air hose, tire connection and gauge supplied. Complete and ready to use when removed from shipping crate.

Net Wt. 110 lbs. Shipping Wt. 155 lbs.

## Prices

110 or 220 V. 60 Cy. A. C. Motor .....	\$110.00
110 or 220 V. D. C. Motor .....	105.00

A. C. Motors other than 60 cycle at additional cost.

## NO. 50 PORTABLE ELECTRIC OUTFIT

This is a very high grade, practical Portable Air Compressor Outfit, entirely complete with all fittings and accessories ready to operate and use upon removal from shipping crate.

It has a powerful  $\frac{1}{4}$  H.P. electric motor that can be operated from any lighting circuit and which will readily start the 1 cu. ft. compressor against a pressure of 130 lbs. and drive the pressure to 175 lbs. The tank is 12 in. x 30 in. and of seamless drawn steel construction.

This outfit will fully inflate two 35 in. x 4 $\frac{1}{2}$  in. tires to 90 lbs. without recharging when filled to 160 lbs. pressure. It is heavily constructed to meet severe conditions.

Net weight 250 lbs. Shipping weight 350 lbs.

Height 32 in. Floor space 20 $\frac{1}{2}$  in. x 36 in.

## PRICES

No. 50 Complete with 110 or 220 V. 60 cy. 1 Phase Motor .....	\$175.00
No. 50 Complete with 110 or 220 V. Direct Current Motor .....	160.00

A. C. Motors for other than 60 cycle at slight additional charge.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## BRUNNER MOTOR DRIVEN AIR COMPRESSORS

### NO. 47 MOTOR DRIVEN COMPRESSOR



This Compressor is our No. 17, driven with Cloth Pinion Gear by a 2 H.P. motor, and delivers 7 cu. ft. free air per minute.

We recommend this outfit as the highest grade Motor Driven Air Compressor on the market for large garages housing up to 175 cars and having one or more floors where a number of service lines are required. Used with any tank up to 120 gallons.

Height, 22 in. Floor space, 25 in. x 22 in.

Net weight, 350 lbs. Shipping weight, 410 lbs.

#### Prices

With 220 or 440 V. 2 or 3 Phase 60 Cy. A. C. Motor .....\$280.00

With 110 or 220 V. Direct Current Motor ..... 305.00

With 110 or 220 V. Single Phase 60 Cy. A. C. Motor ..... 335.00

Motors for other than 60 cycle at additional charge

Model "M" Controller can be used with No. 47 A. C. but not with D. C. Price on D. C. Controller on application.

### MOTOR DRIVEN GARAGE OUTFIT NO. 8

For Large Garages Housing More Than 75 Cars

1 No. 47 Compressor, 220 or 440 V. 2 or 3 Phase, 60 Cy. A. C. ....	\$280.00
1 100 Gal. 22 in. x 60 in. Galvanized Air Tank for 150 lbs. Working Pressure .....	95.00
1 Model "B" Air Gauge .....	2.50
1 No. 76 ½ in. Vertical Check Valve .....	2.75
1 No. 72 Safety Valve for Air Tank .....	2.50
1 No. 84 ½ in. Needle Valve .....	2.75
1 No. 83 ¾ in. Needle Valve .....	1.60
1 No. 82 ¾ in. Needle Valve with Swivel Hose Connection .....	1.90
2 Specially ground Brass Unions, ½ in. and ¾ in. ....	2.00
1 Automatic Tire Connection .....	1.00
1 25 ft. Drop Line 3-16 in. "Resistoil" Air Hose.....	4.25

\$396.25

1 Model "M" Controller to make outfit automatic (Optional) .. 30.00

\$426.25

If this outfit is desired for operation on Direct Current the Model "E" Controller is necessary, and the list price of Direct Current Outfit with Model "E" Controller and the same accessories as specified above is \$486.25.

### NO. 742 MOTOR DRIVEN OUTFIT

Outfit is exactly similar to the No. 542 assembled outfit, except that it is driven by belt instead of gears.

Outfit consists of a No. 102 Air Compressor, 2½ ft. free air per minute capacity, driven by a ½ H.P. motor by leather belt with belt tightener. The power plant is mounted on a 32 gallon welded open hearth flange steel tank tested to 300 lbs., and guaranteed for working pressure of 150 lbs.

Equipment includes air gauge, check valve, needle valves, hose line and tire connection, and when uncrated it is only necessary to wire the motor and connect pipe or hose line to the outlet valve.

Guaranteed for 150 lbs. working air pressure. Height, 34 in. Floor space, 18 in. x 36 in. Net weight, 370 lbs. Crated, 445 lbs.

#### Prices

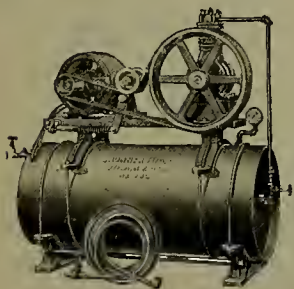
With 1 Phase, 60 Cycle, 110 or 220 V. A. C. Motor .....\$220.00

With 110 or 220 V. Direct Current Motor..... 205.00

With 32 Volt D. C. Motor ..... 210.00

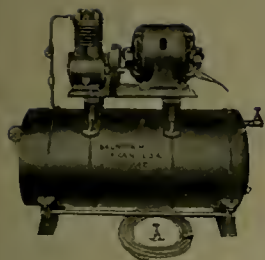
A. C. Motors of other than 60 cycle at additional charge

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.





## No. 542 MOTOR DRIVEN OUTFIT



Outfit consists of a standard No. 102 Brunner Air compressor with capacity of  $2\frac{1}{2}$  cu. ft. of free air per minute, geared by means of a cloth pinion gear and a cut cast iron spur gear to a  $\frac{1}{2}$  H.P. motor, bolted to a substantial iron base and mounted on a 32 gallon welded open hearth flange steel tank tested to 300 lbs.

Equipment includes air gauge, check valve, needle valves, hose line and tire connection, and when uncrated it is only necessary to wire the motor and connect pipe or hose line to the outlet valve.

Tank when charged to 140 lbs. will inflate to 90 lbs. three flat 35 in. x  $4\frac{1}{2}$  in. tires.

Recommended for garages housing up to 50 cars, or in gasoline stations where available space is limited.

Guaranteed for 150 lbs. working air pressure.

Height, 34 in.; Floor space, 18 in. x 36 in. Net weight, 340 lbs. Crated 415 lbs.

### PRICES

With 1 Phase, 60 Cycle, 110 or 220 V. A. C. Motor .....\$210.00

With 110 or 220 V. Direct Current Motor ..... 195.00

With 32 Volt D. C. Motor ..... 200.00

A. C. Motors of other than 60 cycle at additional charge

## No. 68 STATIONARY TIRE INFLATOR

This is a well built Motor Driven Outfit for inflating tires without a storage tank, and operates from any lighting circuit.

Has a heavily built Two-Cylinder Air Cooled Compressor, bore  $1\frac{1}{8}$  in., stroke  $1\frac{1}{2}$  in., pistons equipped with three metal rings and geared to a  $\frac{1}{4}$  H.P. Electric Motor by means of a cloth pinion and mounted upon a substantial cast iron sub-base.

Beautiful gloss black enamel finish. 20 ft. electric cord and plug and 20 ft. heavy air hose, tire connection and gauge supplied. Complete and ready to use when removed from crate.

Net weight, 90 lbs. Shipping weight, 140 lbs.

### PRICES

110 or 220 V. 60 Cy. A. C. Motor .....\$105.00

110 or 220 V. D. C. Motor ..... 100.00

32 V. D. C. Motor ..... 105.00

A. C. Motors other than 60 cycle at additional charge.



## No. 52 PORTABLE ELECTRIC OUTFIT

This machine has a two-cylinder Vertical Compressor delivering  $2\frac{1}{2}$  cu. ft. free air per minute and  $\frac{1}{2}$  H.P. Motor mounted on a seamless steel tank 18 in. x 43 in.

We recommend this outfit for garages housing 50 to 100 cars. The tank when filled to 160 lbs. pressure will fully inflate four 36 in. x 5 in. tires to 90 lbs. When running, the compressor makes air as fast as used in filling tires continuously.

The compressor is driven by a noiseless cloth pinion gear and the  $\frac{1}{2}$  H.P. Motor will start readily against 130 lbs.

Ready for instant use upon removal from shipping crate.

Height, 46 inches. Floor space, 41 x 27 inches. Net weight, 500 lbs. Shipping weight, 645 lbs.

### PRICES

With 110 or 220 V. 60 Cy. 1 Phase A. C. Motor.....\$290.00

With 110 or 220 V. Direct Current Motor..... 265.00

With 32 V. Direct Current Motor..... 270.00

A. C. Motors for other than 60 cycle at additional charge

## SAFETY FUSE PLUG

The Brunner Safety Fuse Plug will prevent damage or burnout to A. C. motors under overload or short circuit conditions. Should be installed in same manner as ordinary fuses. Every Brunner user should equip his system with this safety device. State style of compressor and current when ordering.

Price .....\$7.50



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## BRUNNER AIR TANKS AND FITTINGS

Good fittings are as essential as a good compressor. Don't retard the effectiveness of a good compressor with a leaky tank or fitting of any description. Select your entire outfit from our list and insure a perfect working, satisfactory outfit. We guarantee these tanks and fittings to be the best that money can buy, and our prices are very little, if any, more than for inferior grades.



### No. 82 NEEDLE VALVE

This valve is heavily constructed of brass, designed for use on compressed air lines, carrying pressures up to 200 lbs. Either  $\frac{1}{4}$  in. or  $\frac{3}{8}$  in. male connection on one end to screw into pipe line and swivel hose connection on other end to fit either 3-16 in.,  $\frac{1}{4}$  in. or  $\frac{3}{8}$  in. hose.

A reliable fitting, much bandier than a stop cock.

### No. 83 NEEDLE VALVE

This valve is very similar to the No. 82, but is for use in the pipe line, doing away with an ordinary globe valve. This valve is air tight, and with proper care will stay tight indefinitely.

Both ends have female connections, tapped for either  $\frac{1}{4}$  in. or  $\frac{3}{8}$  in. iron pipe.

Price—With either  $\frac{1}{4}$  in. or  $\frac{3}{8}$  in. Female Connection .....\$1.60



### No. 84 NEEDLE VALVE

This Valve is of exactly the same construction as the No. 83 Needle Valve, but is made in  $\frac{3}{4}$  in. size only.

Price, with  $\frac{1}{2}$  inch Female Connection .....\$2.75

### No. 72 SAFETY VALVE

This is an adjustable Safety Valve having a ball seat, and is air tight. The tension of the spring can be readily adjusted to blow off at any desired pressure up to 175 lbs. and is very reliable. It is made entirely of brass and is very durable. To be used on air tanks carrying a high pressure. Always set for 150 lbs. when shipped unless otherwise specified.

Price—With either  $\frac{1}{4}$  in.,  $\frac{3}{8}$  in. or  $\frac{1}{2}$  in. Male Connection.....\$2.50



### No. 75 VERTICAL CHECK VALVE

This Check Valve is made especially for air lines and should always be used in a vertical position. This valve will give very good service and is a well constructed fitting.

Price—With either  $\frac{1}{4}$  in. or  $\frac{3}{8}$  in. Female Connection .....\$1.60



### No. 76 VERTICAL CHECK VALVE

This is very similar to the No. 75, but is larger and made with  $\frac{1}{2}$  inch female connections only.

Price, with  $\frac{1}{2}$  inch Female Connection .....\$2.75

## BRUNNER "AIRTITE" TANKS

These Tanks are specially constructed for air pressure and are guaranteed air tight. The seams are welded and brazed and they are extra heavy. Tested to 300 lbs. pressure and are guaranteed for a working air pressure of 150 lbs. to the square inch.

### PRICES

20 Gal.	14x30 in.	Wt. 73 lbs.	.....\$20.00	50 Gal.	16x60 in.	Wt. 140 lbs.	.....\$38.00
24 Gal.	14x36 in.	Wt. 75 lbs.	.....21.50	65 Gal.	18x60 in.	Wt. 200 lbs.	.....60.00
26 Gal.	16x30 in.	Wt. 84 lbs.	.....27.00	80 Gal.	18x72 in.	Wt. 225 lbs.	.....70.00
32 Gal.	16x36 in.	Wt. 95 lbs.	.....30.00	100 Gal.	22x60 in.	Wt. 280 lbs.	.....95.00
40 Gal.	16x48 in.	Wt. 100 lbs.	.....35.00				

## BRUNNER AIR PRESSURE GAUGE

These Gauges are exceptionally well made, especially designed for air pressure, and are graduated to 200 lbs.

They are made in Polished Brass Case with Bevel Glass and in Iron Case with Brass Ring. They are of heavy construction and extremely accurate.

Both the Model A Brass Case and Model B Iron Case are 2 $\frac{1}{2}$  in. in diameter and have bottom male connection for  $\frac{1}{4}$  in. iron pipe.

### PRICES

Model A Brass Case	.....\$3.75
Model B Iron Case	.....2.50



## MODEL "M" AUTOMATIC PRESSURE CONTROLLER

It is especially adapted for use in connection with BRUNNER Motor Driven Air Compressors and has never failed to give satisfactory service.

Regularly set to start the Compressor automatically when the tank pressure is reduced to 115 lbs. and stop it when pressure reaches 140 lbs. Can be set for other limits upon order.

For convenience and economy this Controller is essential with motor driven compressors, and it is built up to the recognized BRUNNER quality.

Price .....\$30.00



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## TIRE PUMPS

NO. 1

SUNDERLAND



No. 1 is a high class single barrel pump guaranteed for five years (dented barrels and hose excepted).

Guarantee plate on every pump.

Special solid brass piston is big feature. Piston is of floating type, accurately fitting barrel; piston ring of leather is forced to expand by air pressure from below. This insures high pressure together with easy action.

Steel barrel  $1\frac{1}{4}$  in. diameter.

Smooth hardwood handle.

No. 1. Length, 27 in. Stroke, 24 in. Hose length, 25 in. Weight, complete,  $3\frac{1}{2}$  lbs.  
Price, each .....\$4.10

## C. &amp; S. Pump



Codman and Shurtleff pumps will stand the most severe tests under most exacting conditions. The barrels are heavy, seamless brass, heavily nickel plated. Double metal valves, steel pistons; excellent quality and workmanship. Produce very high pressure with greatest ease.

No. 8, 16-in. stroke,  $1\frac{1}{4}$ -in. bore, each .....\$4.75

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

NO. 2

PUMPS



No. 2 is a two-cylinder compound action pump of high grade material.

It is strongly built and will stand hard service for years. Equipped with the same floating piston as the No. 1 with the exception that instead of the brass piston it uses a special cup leather reinforced with hard fibre washer, making a smooth silent stroke.

Steel barrels  $1\frac{1}{4}$  in. and  $\frac{3}{4}$  in. diameter.

Length, 20 in.

Stroke, 18 in.

Length hose, 20 in.

Weight,  $4\frac{3}{4}$  lbs.

No. 2. Price, each .....\$2.85

No. 3. A three-cylinder triple action pump, very powerful and of extra heavy construction. Similar in construction to the No. 2 pump, but heavier and more powerful. Triple action means much faster action, but requires correspondingly greater effort.

Steel barrels,  $\frac{3}{4}$  in.,  $1\frac{1}{4}$  in. and  $1\frac{3}{4}$  in. diameter. Nickel plated. Length, 22 in. Hose length, 25 in. Stroke, 19 in. Weight, complete,  $8\frac{1}{2}$  lbs.

No. 3. Price, each .....\$5.15

NO. 3

Kellogg No. 10  
Compound Pump

A very powerful and easy working two-cylinder, double action pump. Barrel made of steel, finished in gray enamel. Foot piece is large, and handle is finished extra smooth, to prevent blistered hands.

No. 10, each .....\$3.00

Kellogg Special  
3 Cylinder Pump

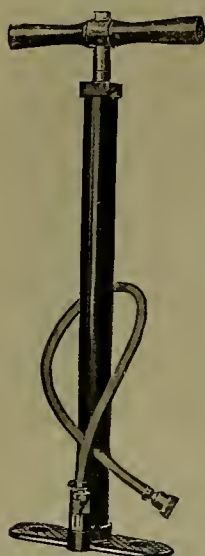
A powerful three-cylinder pump. Cylinders of heavy brass, which will not rust. Nickel plated, and with quick acting valve connection.

Will outlast two or three cheap pumps.

Special, each .....\$7.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## Anthony



A strongly built, powerful single cylinder pump of the highest quality, too well known to need detailed description. Single cylinder, single action, never out of order and will last forever.

Size, 1 1/4 in. x 20 in. Each..\$4.00  
Size, 1 1/2 in. x 17 in. Each.. 4.00

Double Action  
Compound Lever  
Pump

Size of cylinder 2 inches and 3 1/2 inches. Has a pressure up to 150 pounds. This pump is equipped with three valves; one being to prevent the air from returning to the pump after being discharged, which takes a large load off the cylinders, allowing the pump to work considerably easier than if it were equipped with but two valves.

The cylinder base and ground valves are all brass, and the pump is of the finest quality throughout. Three feet of hose and tire connection.

No. 20.	Price each, without gauge	.....\$10.00
No. 25.	Price each, with gauge	..... 12.00

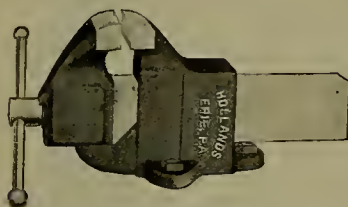
## Crown



A high class single action tire pump, very serviceable for small size tires. The cylinder is made from heavy seamless brass tubing. It has a heavy cast base and a removable screw cap.

Length, 17 1/2 in. Diameter, 1 1/4 in.  
Price, each .....\$1.50

## Stationary Vise



Number	Width Jaw	Opens	Weight	Price.
13	3 in.	4 1/2 in.	25 lbs.	\$10.00
13 1/2	3 1/2 in.	5 in.	30 lbs.	11.25

## Swivel Vise



Number	Width Jaw	Opens	Weight	Price
23	3 in.	4 1/2 in.	30 lbs.	\$13.00
24	4 in.	6 in.	55 lbs.	17.00
24 1/2	4 1/2 in.	7 in.	70 lbs.	20.00

## Hand Vise



No. 60. Polished round rosewood handle hardened steel jaws carbon finish; jaws 1 1/4 in. wide, open parallel, 3/4 inch. A very useful tool.

Price, each .....\$1.75

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## PUMP HOSE AND LEATHERS

**"CAN'T KINK" ARMORED GARAGE AIR HOSE**

More hose is destroyed by the sudden concussion through kinking than by actual wear. It is more flexible than unarmored. The armor is a protection from ABRASION.

This hose and Armor can be cut at every wind of the wire without loosening or uncoiling, the Spring Grip of the wire being self-holding through its entire length. This very essential feature is one of the principal points secured by one of our patents.

Per Ft. Ft. Rolls

Size		Per Ft.	Ft. Rolls
3/16	4 ply	\$0.30	\$7.00
1/4	4 ply	.35	8.50
3/8	5 ply	.40	9.00

**PUMP TUBING**

3-16 inch three-ply cloth inserted tubing	.....\$0.20
3-16 inch five-ply cloth inserted tubing	..... .30
1/4 inch three-ply cloth inserted tubing	..... .25
1/4 inch five-ply cloth inserted tubing	..... .35
3/8 inch five-ply cloth inserted tubing	..... .40

**Gasoline Hose**

Gasoline Hose is used almost exclusively by the larger manufacturers of gasoline devices. It is metal armored inside with an anti-corrosive flat steel armor, with extra layer of canvas, specially treated, making it impervious to the action of oil and gasoline. Approved by the Board of Underwriters.

Price, per ft., 3/4 inch.....\$0.80

**Special Radiator Hose**

Built up of three plies of extra heavy fabric, rubber coated. Far superior to hose usually sold for this purpose. Has heavy inner lining of uncured rubber specially compounded to withstand action of grease and hot water. Nothing equal to it for the purpose for which it is designed.

1 in.	Inside diam., 3 ft. lengths, per ft.	.....\$0.40
1 1/2 in.	Inside diam., 3 ft. lengths, per ft.	..... .42
1 3/4 in.	Inside diam., 3 ft. lengths, per ft.	..... .45
1 3/4 in.	Inside diam., 3 ft. lengths, per ft.	..... .48
2 in.	Inside diam., 3 ft. lengths, per ft.	..... .52
2 1/4 in.	Inside diam., 3 ft. lengths, per ft.	..... .60
2 3/4 in.	Inside diam., 3 ft. lengths, per ft.	..... .66
2 3/4 in.	Inside diam., 3 ft. lengths, per ft.	..... .68
3 in.	Inside diam., 3 ft. lengths, per ft.	..... .76

**Garage Washing Hose**

High grade hose for washing and sprinkling, made in 50 foot lengths, meets the requirements of all classes of service. Extra for couplings when purchased in 25 foot quantities.

With Couplings

1/2 inch, 7 ply, per 50 ft. lengths	.....\$16.50
3/4 inch, 5 ply, per 50 ft. lengths	..... 13.00

**"ESCO" HOSE BANDS**

These little clamps, 1, 2 and 3, are to clamp the hose tightly around the pump connections, such as "Keno" connections and others, used on bicycle and auto pumps.

Per Doz.

No. 1.	3-8 inch inside diameter	.....\$0.35
No. 2.	7-16 inch inside diameter	..... .35
No. 3.	1-2 inch inside diameter	..... .35
No. 4.	5-8 inch inside diameter	..... .45
No. 5.	3-4 inch inside diameter	..... .45
No. 6.	7-8 inch inside diameter	..... .45

Numbers 1, 2 and 3 are brass, and the other sizes are steel galvanized.

**PUMP LEATHERS**

Size	Each	Per Doz.
3/8 inch	.....\$0.05	\$0.20
1 inch	..... .05	.20
1 1/4 inch	..... .05	.30
1 1/2 inch	..... .05	.30
1 3/4 inch	..... .05	.40
1 3/4 inch	..... .06	.60
2 inch	..... .06	.60
2 1/4 inch	..... .15	1.20
2 3/4 inch	..... .20	1.50
3 inch	..... .20	2.00
3 1/4 inch	..... .30	2.30

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

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## Leather Packing Sets

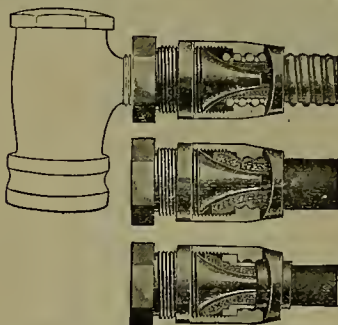


For the leading air pumps. Are carefully made and of best quality. Every set is tied so as to insure delivery of the complete set.

	Price Per Set	Price Doz. Sets
No. 1. Set for Stapley Pumps (Old Model) .....	\$0.20	\$2.00
No. 2. Set for Brown Impulse Pumps.....	.30	3.00
No. 4. Set for Aeolus Pumps .....	.20	2.00
No. 5. Sets for No. 99 Lever Pumps.....	.50	4.80
No. 6. Set for Kellogg Pumps.....	.20	2.00
No. 7. Sets for Rex Pumps .....	.20	2.00
No. 8. Sets for Skinner Pumps.....	.20	2.00
No. 11. Sets for Noera Ideal .....	.20	2.00
No. 13. Sets for Kellogg Power Pumps..	.50	4.80

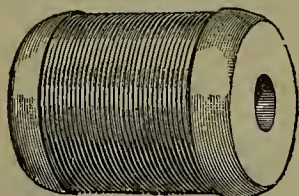
Sets Nos. 2 and 13 are made of very special leather to stand high degree of heat.

## Universal Hose Coupling



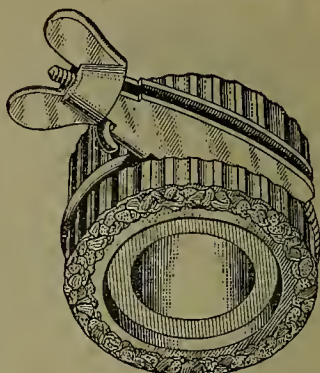
Will positively keep the air valve from blowing off the hose. The only coupling that will fit both metal and rubber hose. One type is all that is necessary to take care of any hose, large or small, rubber or steel covered. A small brass bushing is furnished with each valve. On small hose this bushing is used, on large hose it is not necessary. The hose is expanded at the end and the threaded nipple is so designed that it always holds firm.

Price, each .....\$1.25



Brass, copper and annealed steel wire, 16 to 24 gauge.

## Morgan Hose Clamp



Type 7

A single steel wire in place of a band. As an emergency article for repairs it is invaluable.

No. 3 for Hose $\frac{3}{4}$ -1 $\frac{1}{4}$ O. D., each.....	\$0.08
No. 4 $\frac{1}{2}$ for Hose 1 $\frac{1}{4}$ -1 $\frac{3}{4}$ O. D., each.....	.11
No. 6 for Hose 1 $\frac{3}{4}$ -2 $\frac{1}{4}$ O. D., each.....	.14
No. 7 for Hose 2 $\frac{1}{4}$ -3 $\frac{1}{4}$ O. D., each.....	.16

Extra long for securing universal joints, knuckle joints, etc.

No. 102, 12 $\frac{1}{2}$ inches long, each.....	\$0.18
No. 104, 15 $\frac{1}{2}$ inches long, each.....	.22
No. 107, 20 inches long, each.....	.28

## Hose Clamp



A simple, positive hose clamp that has a sure grip. No trouble to attach.

No. 7 measures 1-in. inside when open, each....	\$0.09
No. 8 measures 1 $\frac{1}{4}$ -in. inside when open, each....	.09
No. 9 measures 1 $\frac{1}{2}$ -in. inside when open, each....	.09
No. 10 measures 1 $\frac{3}{4}$ -in. inside when open, each....	.15
No. 11 measures 1 $\frac{3}{4}$ -in. inside when open, each....	.20
No. 12 measures 2-in. inside when open, each....	.25
No. 13 measures 2 $\frac{1}{4}$ -in. inside when open, each....	.30
No. 14 measures 2 $\frac{1}{2}$ -in. inside when open, each....	.35
No. 15 measures 3-in. inside when open, each....	.60

## Spring and Soft Wire

Annealed steel wire, 1 lb. rolls.....	\$0.75
Spring brass wire, 1 lb. rolls.....	1.00
Soft brass wire, 1 lb. rolls.....	1.00
Copper wire, $\frac{1}{4}$ lb. spools .....	.25

## Steel Piano Wire

Experience has shown that a high grade of piano wire is the best to use on account of its extreme lightness and strength. We handle every size, but quote merely the sizes most common to aeronautical construction and for making springs.

Per 1 lb. roll .....\$2.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## PUMP CONNECTIONS



THE ROMORT AUTOMATIC AIR VALVE  
Style "A"

The Romort Automatic Air Valve Style "A" is the most popular valve in use for heavy work. Solid bronze, practically indestructible. Made to fit any size tubing. All parts (with exception of rubber gasket) guaranteed to wear one year without repair or replacement. Instantaneous in opening and closing, positively air tight. Impossible for users to waste air. Weight 9 ounces.

Each .....\$3.00



THE ROMORT AUTOMATIC AIR VALVE  
Style "B"

The Romort Automatic Air Valve, Style "B" is a high grade air valve made to meet the popular demand for a light and inexpensive automatic air device. Solid bronze, one piece casting, universal stem will fit any size tubing. Automatic in opening and closing. Guaranteed air tight. Highly recommended for Public Service Stations, Vulcanizers and Repair Shops. Weight 5 ounces.

Each .....\$1.25



AIR-CHUCK

No. 47. AUTOMATIC AIR CHUCK

The Chuck is entirely automatic. To operate, simply slip connection over Tire Valve and press downward. When tire is sufficiently inflated you remove from tire valve and air chuck shuts off automatically. All parts are easily unscrewed and interchangeable.

Price, each .....\$1.00



SCHRADER UNIVERSAL PUMP CONNECTION

May be attached to any and all pumps now in use for inflating automobile or motorcycle or bicycle tires. It screws on to the end of the rubber tubing of the pump, as shown in the illustration, and connects with the tire valve by means of a simple swivel-nut. In combination with the contact with the tire-valve, is a deflating pin which permits of the pressure in the tire being taken while the pump is still attached to the tire in operation.

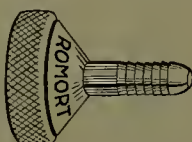
Each .....\$0.50



VELOX PUMP CONNECTION.

Positive, instantaneous, absolutely air tight, fits any tire valve, quickest and most practical.

Price, each .....\$0.20  
Rubbers only, each ..... .06



ROMORT STRAIGHT PUMP  
CONNECTION.

Not Automatic.

Each .....\$0.20

Rubbers ..... .05



PERFECTION

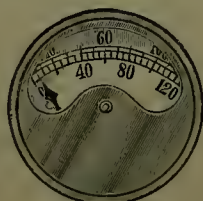
Heavy brass, fits outside of valves.

Each .....\$0.20

## PRESSURE GAUGES



No. 1. Each .....\$1.00



Guaranteed to be within 2 per cent. correct as to pressure. Nothing to get out of order.

No. 2. Each .....\$1.00

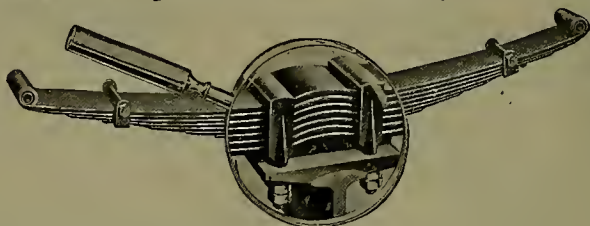


No. 3. Each .....\$1.00



# TUTHILL TITANIC SPRINGS

NO  
CENTER  
BOLT

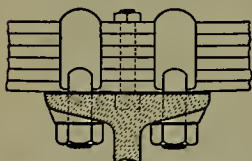


NO  
CENTER  
NIB

## THREE OUT OF FOUR SPRINGS BREAK AT THE CENTER

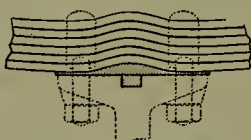
Your experience tells you that three out of four springs break at the center, where the greatest strain comes. Can you think of any better way to weaken a bar of steel than to punch a hole through the center, as is done with the center-bolt type, as illustrated below? So-called boltless springs, made with a center-nib, are also weakened at the center the same as the regular center-bolt type.

CENTER-BOLT TYPE



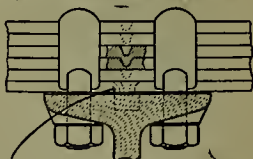
EVERY PLATE HAS A HOLE THROUGH THE CENTER WHERE THE GREATEST STRAIN COMES

TUTHILL-TITANIC TYPE E



NO WEAKENING CENTER HOLE  
OR CENTER NIB. NOTE WEDGE SHAPED PLATE  
THAT TAKES PLACE OF CENTER BOLT OR  
STUD AND CANNOT SHEAR OFF.

CENTER-NIB TYPE  
OR SO CALLED BOLTLESS TYPE



NOTE LARGE HOLE WHICH WEAKENS MORE  
THAN OLD STYLE CENTER BOLT HOLE

## WHY TITANIC SPRINGS NEVER BREAK AT THE CENTER

Tuthill TITANIC springs are strong at the center where old style center-bolt or center-nib springs are the weakest. A patented arch and wedge shaped plate takes the place of bolt or nib, strengthening, instead of weakening, the spring. TITANIC springs are lubricated in a most thorough and lasting manner. The TITANIC style is adapted for practically every make and model of car and all springs designated as "Style E" in list are of this type.

**Guarantee** Tuthill TITANICS are guaranteed forever against center breakage. All Tuthill springs, including TITANIC, center-bolt, or center-nib styles are guaranteed for one year against breakage at any point, excepting Ford Fronts center-bolt type.

## HOW TO ORDER SPRINGS

**STOCK SPRINGS.** All springs listed on the following pages are Stock Springs, order them by stock number only.

**SPECIAL SPRINGS.** We can furnish springs for any car, and if the spring you want, is not listed, write us for quotations, giving make, model, and year of car.

**QUALITY OF STEEL.** All springs listed (exceptions noted in list) are made of the best *Standard Quality* Carbon Auto Spring Steel. If *Special Quality* Tuthill Alloy is desired add 100% to prices as listed. *Special Quality* springs are guaranteed for two years.

## STYLES OF SPRINGS AND ABBREVIATIONS USED



F—Front R—Rear  
U. H. R.—Upper Half Rear

C—Cross H—Helve.  
U. Q. R.—Upper Quarter Rear

L. H. R.—Lower Half Rear  
Cant.—Cantilever.



TUTHILL ~~ILLINOIS~~ SPRINGS

## ABBOTT-DETROIT

Stock No.	Model	Location	Style	Price
150.	44-50-1912-15.	F.	E.	\$ 8 25
151.	44-50-1912	L.H.R.	E.	10 75
152.	34-40-1913-K-1914.	F.	A only	8 00
153.	34-40-1913	L.H.R.	A only	10 25
154.	44-50-1913	F.	A only	8 00
155.	44-50-1913	L.H.R.	A only	11 00
156.	44-50-1914-15-8-90-1915	F.	A only	10 00
157.	44-50-1914	L.H.R.	A only	13 50

## APPERSON

3025.	6-48-8-58-1915	F.	E.	6 00
3026.	6-48-8-58-1916	L.H.R.	E.	11 50
3027.	6-48-8-58-1915	U.Q.R.	C.	6 30

## BRISCOE

1725.	1915	F.	E.	5 00
1726.	1915	R.	E.	7 50
1727.	4-38-1916	F.	E.	5 00
1728.	4-38-1915	R.	Cant.	12 75
1729.	4-24-1917-18	F.	D.	7 75
1730.	4-24-1917-18	R.	D.	9 00

## BUICK

200.	10-24-25-32-33-34-35-36	F.	E.	5 50
203.	10-24-34-35	L.H.R.	E.	4 50
204.	10-32-34-35	U.H.R.	B.	5 00
218.	24-25	L.H.R.	E.	7 50
235.	24-25	U.Q.R.	C.	3 90
202.	26-27	F.	E.	6 00
202.	26-27-33-35	L.H.R.	E.	6 00
206.	26-27-33-35	F.	E.	6 25
207.	16-17	R.	B.	8 50
214.	19-21	F.	E.	6 75
215.	19	L.H.R.	E.	7 00
215.	19	U.H.R.	B.	7 50
217.	21	L.H.R.	E.	9 25
235.	21	U.Q.R.	C.	5 40
219.	28-29	F.	E.	6 50
220.	28-29	L.H.R.	E.	7 75
221.	30-31	F.	E.	7 50
222.	30-31	L.H.R.	E.	8 25
237.	28-29-30-31	U.Q.R.	C.	4 50
208.	38-39-43	F.	E.	8 25
223.	38	L.H.R.	E.	10 25
238.	38	U.Q.R.	C.	4 50
225.	40	F.	E.	7 50
227.	B24-B25-1914	F.	E.	7 00
228.	B24-1914	L.H.R.	E.	8 00
241.	B24-1914	U.Q.R.	C.	4 20
229.	B25-1914	L.H.R.	E.	8 75
242.	B25-1914	U.Q.R.	C.	4 80
230.	B36-B37-1914	F.	E.	7 50
231.	B36-1914	L.H.R.	E.	9 75
243.	B36-1914	U.Q.R.	C.	5 10
232.	B37-1914	L.H.R.	E.	10 50
244.	B37-1914	U.Q.R.	C.	5 10
233.	B56-1914	F.	E.	10 25
234.	B56-1914	L.H.R.	E.	19 75
245.	B55-1914	U.Q.R.	C.	10 20
227.	C24-C25-1915	F.	E.	7 00
247.	C24-1915	L.H.R.	E.	8 25
248.	C24-1915	U.Q.R.	C.	5 60
249.	C26-1915	L.H.R.	E.	9 00
250.	C25-1915	U.Q.R.	C.	4 50
230.	C36-C37-1915	F.	E.	7 50
252.	C36-1915	L.H.R.	E.	10 00
253.	C36-1915	U.Q.R.	C.	4 80
254.	C37-1915	L.H.R.	E.	11 25
255.	C37-1915	U.Q.R.	C.	5 40
256.	C65-D55-1915-16	F.	E.	10 50
257.	C65-D55-1915	R.	Cant.	23 75
258.	D44-D46-1915	F.	E.	9 75
259.	D44-D46-1915	R.	Cant.	17 00
260.	D45-D47-1915	F.	E.	3 25
261.	D45-D47-1915	R.	Cant.	17 25
262.	D54-1915	F.	E.	15 75
263.	D54-1915	R.	Cant.	20 50
265.	D34-D35-1917	F.	E.	6 25
258.	D34-1917	R.	E.	8 00
257.	D36-1917	R.	E.	10 00
266.	E34-E35-1918	F.	E.	6 25
267.	E34-1918	R.	E.	8 00
267.	E35-1918	R.	E.	10 00
269.	E46-1918	F.	E.	9 00
251.	E45-1918	R.	Cant.	17 25
270.	E49-1918	F.	E.	10 50
271.	E49-1918	R.	Cant.	21 00

## CADILLAC

Stock No.	Model	Location	Style	Price
302.	30-1909	F.	E.	\$ 7 50
303.	30-1910 Right	F.	E.	8 75
304.	30-1910 Left	F.	E.	7 75
305.	30-1911 Right	F.	E.	8 50
306.	30-1911 Left	F.	E.	7 50
307.	30-1909-10-11 Left	R.	E.	8 75
308.	30-1910-11 Right	R.	E.	10 00
312.	30-1909-10-11	C.	A only	8 25
315.	30-1912-13 Right	F.	E.	10 25
323.	30-1912-13 Left	F.	E.	9 25
315.	30-1912	F.	E.	10 50
317.	30-1912	C.	A only	9 25
318.	30-1913	R.	A only	11 50
319.	30-1913	C.	A only	10 50
315.	30-1914	F.	E.	10 25
321.	30-1914	R.	A only	15 50
322.	30-1914	C.	A only	12 25
324.	51-53-1915-16	F.	E.	12 00
325.	51-53-1915-15	R.2 Pas.	A only	12 75
326.	51-53-1915-15	R.5 Pas.	A only	14 75
327.	51-53-1915-15	R.7 Pas.	A only	17 50
328.	51-53-1915-15	C.2 Pas.	A only	7 00
329.	51-53-1915-15	C.5 Pas.	A only	9 25
330.	51-53-1915-15	C.7 Pas.	A only	11 50
331.	55-57-1917-18	F.	A only	11 50
332.	55-57-1917-18	R.2 Pas.	A only	11 25
333.	55-57-1917-18	R.5 Pas.	A only	14 00
334.	55-57-1917-18	R.7 Pas.	A only	15 50
335.	55-57-1917-18	C.2 Pas.	A only	7 50
336.	55-57-1917-18	C.5 Pas.	A only	8 00
337.	55-57-1917-18	C.7 Pas.	A only	10 50

## CHALMERS

500.	17-19-30-36	F.	E.	8 25
504.	40	F.	E.	9 25
506.	18-1913	F.	E.	10 25
508.	24-29-1914-15-16	F.	E.	10 00
509.	24-29-1914-15-16	L.H.R.	A only	14 75
514.	25A-25B-1914-15	F.	E.	7 75
515.	25A-1914	L.H.R.	A only	11 25
517.	25B-1915	L.H.R.	A only	9 75
518.	25B-1915	U.Q.R.	C.	6 30
520.	32A-32B-1916-15	F.	E.	7 00
521.	32A-1915	R.	Cant.	18 25
522.	32B-1915	R.	E.	15 00
523.	35-1915	F.	E.	7 50
524.	35-1915	R.	E.	12 00
525.	35B-1917	F.	E.	7 00
524.	35B-1917	R.	E.	12 00
525.	35C-1918	F.	E.	7 00
524.	35C-1918	R.	E.	12 00

## CHANDLER

1650.	6-1914-15	F.	E.	8 50
1651.	6-1914-15	L.H.R.	E.	11 50
1652.	6-1914-15	U.Q.R.	C.	4 80
1653.	17-1915	F.	E.	10 00
1654.	17-1915	R.	E.	15 50
1655.	17-1917	F.	E.	10 25
1656.	17-1917	R.	E.	15 25

## CHEVROLET

825.	H2-H4-1913-15	F.	E.	7 00
835.	H2-H4-1917	F.	E.	7 50
826.	H2-1913-17	L.H.R.	E.	7 50
827.	H2-1913-17	U.Q.R.	C.	3 90
828.	H4-1913-17	L.H.R.	E.	8 50
829.	H4-1913-17	U.Q.R.	C.	4 80
830.	H2-1916-15	U.Q.R.	C.	5 10
831.	H4-1915-15	U.Q.R.	C.	5 70
832.	490-1916	F.	1/4 Ell.	3 00
833.	490-1915	R.	1/4 Ell.	6 00
834.	490-1917	F.	1/4 Ell.	6 00
833.	490-1917	R.	Cant.	8 25
835.	490-1918	F.	1/4 Ell.	6 00
833.	490-1918	R.	Cant.	8 25
837.	FA2-1918	F.	E.	8 50
838.	FA2-1918	R.	Cant.	9 75
837.	FA5-1918	F.	E.	8 50
839.	FA5-1918	R.	Cant.	12 25
837.	D-1918	F.	E.	8 50
840.	D-1918	R.	Cant.	12 00

## CROW-ELKHART

3200.	23-25-30-1916-17	F.	E.	5 50
3201.	23-25-30-1916-17	L.H.R.	A only	6 50
3202.	23-25-30-1916-17	U.Q.R.	C.	5 10

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# TUTHILL ATLANTIC SPRINGS

## DETROITER

Stock No.	Model	Location	Style	Price
1300.	A-B-C-D	F	E	\$ 6.25
1301.	A-B	R	E	5.50
1302.	A-B	C	A	6.25
1303.	C-D	R	E	6.25
1304.	C-D	C	A	6.75
1305.	6-46	F	E	7.50
1306.	6-46	R	A	10.50

## DODGE

1150.	1915-16-17-13	F	E	5.50
1151.	1915-16-17-18	L.H.R.	E	8.00
1152.	1915-16-17-18	U.Q.R.	C	3.60

## DORT

1450.	1916-1917	F	E	6.50
1451.	1916-1917	R	Cant.	12.75

## ELGIN

3300.	6-1916	F	E	5.50
3301.	6-1916	R	Cant.	12.25
3302.	6-1917	F	E	5.75
3303.	6-1917	R	Cant.	11.00
3304.	6-1918	F	E	7.00
3305.	6-1918	R	Cant.	13.50

## EMPIRE

2025.	31-40 up to 1916	F	E	5.75
2026.	31-40 up to 1916	L.H.R.	E	9.00
2027.	31-40 up to 1916	U.Q.R.	C	4.20
2028.	33-1916	F	E	6.00
2029.	4-46-1916	F	E	6.50
2030.	4-46-1916	R	A	12.75
2029.	6-50-1916	F	E	6.50
2032.	6-50-1916	L.H.R.	A	13.00
2033.	6-50-1916	U.Q.R.	C	6.75

## FLANDERS

1700.	20	F	E	6.00
1701.	20	L.H.R.	E	6.00
1702.	20	U.H.R.	B	6.25

## FORD

### NOT GUARANTEED

100.	T (7 Plates)	F	A only	Prices on
108.	T (9 Plates)	F	A only	application

## FORD

### GUARANTEED

Guarantee on Titanic Ford Front Springs covers pleasure car models only.

102.	T	F	E	6.50
111.	T (9 Plates)	F	E	8.00
105.	T (8 Plates) Std. Tread.	R	Spec'l	14.00
113.	T (10 Plates) Std. Tread.	R	Spec'l	17.00
106.	T No. Tread.	R	Spec'l	16.00

## GRANT

2450.	T6-1916	F	E	4.50
2451.	T6-1916	R	Cant.	10.50

## HAYNES

1100.	19	F	E	7.75
1101.	19	L.H.R.	E	8.50
1102.	30-33-34-36	F	E	10.00
1104.	30R	R	A	10.00
1105.	30T	R	A	11.25
1106.	33	R	A	12.50
1107.	34	R	A	11.25
1108.	36	R	A	13.00
1109.	36-37-38R-40-41	F	E	10.00
1110.	36R-38R-40R	R	A	11.00
1111.	36T-38T-40T	R	A	12.75
1112.	37-39-41	R	A	14.50

## HUDSON

600.	20	F	E	5.25
601.	20	L.H.R.	E	8.50
614.	20	U.Q.R.	C	3.90
602.	33-1911	F	E	6.75
605.	33-1911	L.H.R.	E	10.60
618.	33-1911	U.Q.R.	C	5.40
603.	33-1912	F	E	6.75
606.	33-1912	L.H.R.	E	12.75
619.	33-1912	U.Q.R.	C	5.10
604.	37-1913	F	E	7.00
607.	37-1913	L.H.R.	E	10.50
620.	37-1913	U.Q.R.	C	6.00
608.	64-1913	F	E	8.00
609.	64-1913	L.H.R.	E	14.50

## HUDSON (Cont'd)

Stock No.	Model	Location	Style	Price
615.	64-1913	U.Q.R.	C	\$ 6.30
610.	6-40-1914-16	F	E	9.25
611.	6-40-1914-16	L.H.R.	E	14.00
616.	6-40-1914-15	U.Q.R.	C	4.50
612.	6-64-1914	F	E	12.00
613.	6-64-1914	L.H.R.	A only	16.25
617.	6-64-1914	U.Q.R.	C	5.40
622.	6-40-1916 Roadster	L.H.R.	E	10.00
623.	6-40-1916 Roadster	U.Q.R.	C	4.20
626.	6-40-1916	F	E	10.25
627.	6-40-1916	L.H.R.	A	15.00
628.	6-40-1916	U.Q.R.	C	5.40
629.	Super Six-1916-17	F	E	12.00
630.	Super Six-1916-17	R	A only	16.25

## HUPMOBILE

700.	20 All Models	F	E	4.25
701.	20 Roadster Std. Tread.	R	A only	6.25
702.	20 Touring Std. Tread.	R	A only	8.00
703.	20 Roadster So. Tread.	R	A only	7.00
704.	20 Touring So. Tread.	R	A only	8.00
714.	20-Auxiliary	R	Spec'l	2.50
705.	32-1912 (7 Plate)	F	E	6.25
706.	32-1912 (7 Plate)	F	E	6.25
707.	32-1914 (7 Plate)	F	E	6.25
708.	32 Std. Tread 1912-13	R	A only	10.00
709.	32 So. Tread 1912-13	R	A only	13.25
710.	32-Std. Tread 1914	R	A only	12.50
711.	32 So. Tread 1914	R	A only	13.25
715.	32-Auxiliary	R	Spec'l	2.50
712.	K-1916-N-1916	F	E	7.00
713.	K-1915-N-1916	R	E	12.00
717.	NU-1917	F	E	8.75
718.	NU-1917	R	A	15.00

## KRIT

1400.	1914	F	E	5.25
1401.	1914	U.H.R.	Spec'l	6.25
1402.	1914	L.H.R.	A	6.25

## MAXWELL

1502.	A	F	D	5.25
1503.	A	R	D	6.75
1521.	Messenger	F	D	6.00
1522.	Messenger	R	D	7.50
1504.	O Mascotte	F	E	5.75
1505.	O	L.H.R.	E	6.75
1514.	O Mascotte	U.Q.R.	C	7.00
1518.	Mascotte	L.H.R.	E	6.75
1506.	E. G. Ea. Ga.	F	E	10.75
1507.	E. G. Ea. Ga.	L.H.R.	E	3.60
1515.	E. G. Ea. Ga.	U.Q.R.	C	4.50
1508.	26-1914	F	E	6.25
1509.	25-1914	R	E	5.25
1523.	25-1915-1916	F	E	6.25
1524.	25-1916-1916	L.H.R.	E	3.00
1519.	25-1915-1916	U.Q.R.	C	5.25
1523.	25-1917	F	E	7.50
1525.	25-1917	L.H.R.	E	3.30
1526.	25-1917	U.Q.R.	C	5.25
1523.	25-1918	R	E	10.00
1527.	25-1918	F	A	7.00
1510.	35-1914	F	E	8.50
1511.	35-1914	L.H.R.	E	3.00
1516.	35-1914	U.Q.R.	C	7.50
1512.	60-1914	F	E	15.75
1513.	60-1914	L.H.R.	E	5.40
1517.	60-1914	U.Q.R.	C	

## METZ

1600.	1912-1913	F or R	D	5.25
1601.	1914-1915-1916	F	D	5.75
1602.	1914-1916-1916	R	D	6.25
1603.	1917-18	F	D	7.75
1604.	1917-18	R	D	7.50

## MONROE

3400.	1917 Roadster	F	E	4.25
3401.	1917 Roadster	L.H.R.	E	6.00
3402.	1917 Roadster	U.Q.R.	C	3.00

## OAKLAND

200.	30-1910-1911	F	E	5.50
900.	30-1910-1911	L.H.R.	E	6.25
901.	30-1910-1911	U.H.R.	B	6.50
902.	30-1912-1913	F	E	6.75
903.	36-1913 36-1914	F	E	7.00
904.	35-1913 36-1914	L.H.R.	E	10.50
916.	35-1913 36-1914	U.Q.R.	C	6.90
905.	40-1910-1911	F	E	6.00

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## TUTHILL TITANIC SPRINGS

## OAKLAND (Cont'd)

Stock No.	Model	Location	Style	Price
925.	40-1910-1911	R	D	\$15.75
906	40-1912-1913	F	E	9.25
917	40-1912-1913	L.H.R.	E	12.25
927	42-1913	F	E	10.00
928	42-1913	L.H.R.	E	11.00
907	45-1913	F	E	10.25
926	45-1913	L.H.R.	E	14.00
910	43-1914	F	E	9.75
911	43-1914	L.H.R.	E	13.50
912	48-1914	F	E	10.50
914	6-60-1914	F	E	12.75
915	6-60-1914	L.H.R.	E	18.25
922	37-1915	F	E	6.50
923	37-1915	L.H.R.	E	10.00
924	37-1915	U.Q.R.	C	3.60
930	49-1915	F	E	10.25
931	49-1915	L.H.R.	E	13.25
933	32-1916	F	E	6.00
934	32-1916	L.H.R.	E	7.75
935	32-1916	U.Q.R.	C	3.60
939	32B-1916	F	E	5.75
945	32B-1916	L.H.R.	E	7.75
946	32B-1916	U.Q.R.	C	3.60
936	38-1916	F	E	6.50
937	38-1916	L.H.R.	E	10.25
938	38-1916	U.Q.R.	C	3.60
940	8-60-1916	F	E	12.25
941	8-60-1916	L.H.R.	E	13.25
943	34-1917	F	E	6.00
944	34-1917	F	A only	9.75
939	34B-1918	F	E	5.75
944	34B-1918	R	A only	9.75

## OLDSMOBILE

3500.	8-44-1916-17	F	E	7.75
3501.	8-44-1916-17	L.H.R.	A only	10.50
3502.	8-44-1916-17	U.Q.R.	C	4.80

## OVERLAND

400.	38	F	E	5.75
401.	38	L.H.R.	E	5.00
402.	38	U.H.R.	B	5.75
403	40-41-42-50-51-55-56-60	F	E	7.50
404	40-41-42-50-51-55-56-60	L.H.R.	E	9.00
409	40-41-42-50-51-55-56	U.Q.R.	C	3.90
413	52-53-54	F	E	10.50
414	52-53-54	L.H.R.	E	8.75
415	52-53-54	U.Q.R.	C	4.50
405	59-59-79	F	E	6.50
406	59-59	L.H.R.	E	7.50
418	79	L.H.R.	E	8.50
421	80-1915	F	E	6.25
422	80-1915	L.H.R.	E	11.50
423	80-1915	U.Q.R.	C	6.00
424	81-1915	F	E	6.75
425	81-1915	L.H.R.	E	8.50
426	81-1915	U.Q.R.	C	3.60
427	82-86	F	E	9.00
428	82-86	L.H.R.	E	13.50
429	82-86	U.Q.R.	C	5.10
424	83-1916	F	E	6.75
430	83-1916	L.H.R.	E	9.25
431	83-1916	U.Q.R.	C	3.60
432	84-1916	F	E	7.50
433	84-1916	L.H.R.	E	12.50
434	84-1916	U.Q.R.	C	6.00
435	76-75B-1916	F	E	6.25
436	76-75B-1916	R	Cont.	11.25
437	85-4-86-6-1917	F	E	8.00
438	85-4-86-6-1917	R	Cont.	17.00
439	88-6-88-8-1917	F	E	10.75
440	88-6-88-8-1917	R	Cont.	18.50
427	89-6-1917	F	E	9.00
440	89-6-1917	R	Cont.	18.50
441	90-1917	F	E	6.50
442	90-1917	R	Cont.	12.00

## PACKARD

2707.	18-1911	F	E	8.25
2708.	18-1911 (Spec. Qual.)	R	E	17.00
2713.	30-1909-10-11-12	F	E	9.25
2714.	30-1909-10-11-12 (Spec. Qual.)	R	E	25.25
2711.	2-48 3-48	F	E	11.00
2712.	2-48 3-48 (Spec. Qual.)	L.H.R.	A only	29.75
2715.	4-48 6-48	F	E	12.25
2716.	4-48 8-48 (Spec. Qual.)	L.H.R.	A only	33.25

## PAIGE-DETROIT

Stock No.	Model	Location	Style	Price
1900.	25-1912-1913-1914	F	E	\$ 5.00
1901.	25-1914-15	F	E	5.75
1902.	25-1912-13-14	R	D	20.25
1904.	35-1912-13-14	F	E	5.00
1905.	35-1914-16-2	F	E	6.00
1909.	6-46-1915	F	E	8.00
1910.	6-46-1915	R	Cont.	16.75
1911.	6-36-1916	F	E	7.50
1912.	6-36-1916	R	Cont.	12.00
1913.	6-38-1916	F	E	8.00
1912.	6-38-1916	R	Cont.	12.00
1914.	6-46-1916	F	E	8.75
1910.	6-46-1916	R	Cont.	16.75
1913.	6-39-1917	F	E	8.00
1912.	6-39-1917	R	Cont.	12.00
1915.	6-51-1917	F	E	11.25
1910.	6-51-1917	R	Cont.	16.75

## REGAL

2100.	All L. F. Models	F	E	6.25
2103.	H. Underslung 1913	F	E	7.50
2104.	H. Underslung 1913	R	A	8.50
2105.	T. Underslung 1913-14	F	E	6.75
2106.	T. Underslung 1913	R	E	8.75
2107.	C-1914	L.H.R.	E	11.00
2108.	C-1914	L.H.R.	E	11.00
2110.	T-1914	R	E	13.00

## REO

2202.	R	F	E	7.00
2203.	R	L.H.R.	E	8.25
2204.	Fifth 1912	F	E	7.75
2205.	Fifth 1912	L.H.R.	E	8.50
2206.	Fifth 1913-14-15	F	E	7.75
2213.	Fifth 1916-17	F	E	7.75
2207.	Fifth 1913-14-15-16-17	L.H.R.	E	9.75
2211.	Sixth 1915-16-17	F	E	9.25
2212.	Sixth 1915-16-17	R	Cont.	15.50

## SAXON

1350.	4 Cyl.-1915-16-17	F	Cont.	4.25
1351.	4 Cyl.-1915-16-17	R	Cont.	3.50
1352.	6 Cyl.-1915-16-17	F	Cont.	7.75
1353.	6 Cyl.-1915-16	R	Cont.	9.00
1354.	6 Cyl.-1917	R	Cont.	14.00

## SCRIPPS-BOOTH

1825.	1915 (5 Plate)	F	A	3.75
1826.	1915-16 (6 Plate)	F	A	4.25
1827.	1915-16	R	Cont.	5.75
1826.	4 Cyl.-1917	F	A	4.00
1828.	4 Cyl.-1917	R	4 Ell.	5.75
1829.	8 Cyl.-1917	F	A only	5.00
1830.	8 Cyl.-1917	R	Cont.	11.25

## STEARNS KNIGHT

3601.	L4-1916	F	E	7.50
3602.	L4-1916	R	Cont.	18.50
3603.	8-1917	F	E	8.75
3604.	8-1917	R	Cont.	20.25

## STUDEBAKER

2300.	25-1913	F	E	6.25
2305.	4B-1914-15	F	E	6.75
2306.	4B-1914-15	L.H.R.	B	7.50
2307.	4B-1914-15	U.H.R.	B	7.75
2308.	35-1913	F	E	7.75
2304.	35-1913-14-15 Overhung	L.H.R.	E	10.75
2311.	35-1913-14-15	U.Q.R.	C	5.25
2308.	6 Cyl.-1914-15	F	E	7.75
2309.	6 Cyl.-1914-15 Underslg	L.H.R.	E	11.00
2311.	6 Cyl.-1914-15	U.Q.R.	C	5.40
2312.	4-40-1916	F	E	8.25
2313.	4-40-1916	L.H.R.	E	11.50
2314.	4-40-1916	U.Q.R.	C	4.20
2315.	6-50-1916	F	E	8.25
2316.	6-50-1916	L.H.R.	E	13.00
2317.	6-50-1916	U.Q.R.	C	6.00
2312.	Series 18 4-Cyl.	F	E	8.25
2313.	Series 18 4-Cyl.	L.H.R.	E	11.50
2314.	Series 18 4-Cyl.	U.Q.R.	C	4.20
2315.	Series 18 6-Cyl.	F	E	8.25
2316.	Series 18 6-Cyl.	L.H.R.	E	13.00
2317.	Series 18 6-Cyl.	U.Q.R.	C	6.00

## WHITE

3100.	GAB-GAD-GAF-GAG	F	E	9.00
3101.	GAB-GAD-GAF-GAG	L.H.R.	E	10.00
3102.	GAB-GAD-GAF-GAG	U.Q.R.	C	5.10

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## Avery Spring Lubricators



Consists of fibrous strips built up with graphite compound. Simply spread the spring leaves with a spring spreader and insert a strip between each leaf of the springs. Stops the squeak and makes riding easy. Sixty strips to a box.

Per box, each .....\$1.00

## Auto Spring Clips



Heavy Half Oval Pattern

Made of  $\frac{3}{8}$  inch stock, with shanks long enough to cut down in most instances, giving the dealer a very complete assortment with the least number of different clips. Diameter of shanks 7-16 inches.

No.	Width of spring	Flat Part of clip	Length over all
150C	1½ in.	1 in.	2½ in.
150E	1½ in.	1 7-16 in.	3 in.
175C	1¾ in.	1 3-16 in.	3 in.
175P	1¾ in.	1¾ in.	3½ in.
175J	1¾ in.	2½ in.	4 in.
200B	2 in.	1 3-16 in.	3½ in.
200G	2 in.	1¾ in.	3½ in.
200HH	2 in.	2¼ in.	4½ in.

Price, each .....\$0.40

## Spring Clip Package

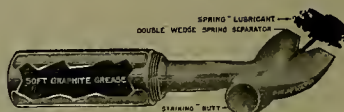
QS-32

Quan.	Size No.	Spring	Flat	Stem	Over all under head
4	Ford Front	...	.....	....	...
4	Ford Rear	...	.....	....	...
2	150 D	1½	1 3-16	7-16	2½
2	175 C	1¾	1 3-16	7-16	3
2	175 F	1¾	1¾	7-16	3½
2	175 H	1¾	2	7-16	3½
2	200 B	2	1 3-16	7-16	3½
2	200 G	2	1¾	7-16	3½
2	200 L	2	1½	¾	3½
2	200 BB	2	1 15-16	¾	4½
2	225 B	2½	2	¾	4
2	225 D	2½	1¾	9-16	4
2	250 D	2½	2	¾	4½
2	250 M	2½	1¾	9-16	4½

Order as "Package QS-32"

Each package .....\$18.75

## Tomahawk Spring Lubricator



Makes spring lubrication easy. It will increase the comfort of riding in your car 100 per cent. and stops the squeak, prevents the leaves from rusting together and breaking.

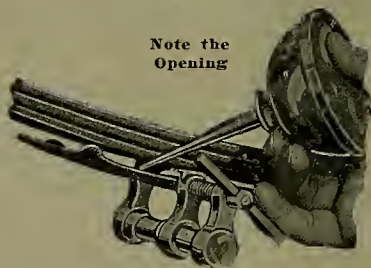
The simplest, quickest and most effective tool on the market for spring lubrication. Made of the finest drop-forged steel, hardened and nickel plated.

Graphite grease is fed from container in handle. Any form of grease can be fed.

One blow of the hammer, a twist of the wrist and the trick is done.

Each .....\$1.25

## No. 20. Spring Leaf Lubricator



(Guaranteed)

Adjustable to any size auto spring; simple, quick and effective, separates the leaves just enough to insert the lubricant, and will not damage or mar your springs. It is also temporary repair clamp. When the leaves of your springs are not lubricated they become rusty and freeze or adhere to each other. They are soon like one solid piece of steel.

No. 20. Price, each .....\$1.75

## No. 2904. Spring Leaf Separator



One of the most useful tools for the garage or owner. Both hardened steel points are flattened, making a perfect wedge, one is swiveled to the screw so that the point does not revolve with the screw. This prevents checking the springs which frequently leads to cracks or breakage.

Quickly spreads the leaves of a spring far enough apart to be thoroughly oiled; not necessary to loosen clip or jack up frame.

Eliminates the necessity of taking springs apart for lubrication.

No. 2904. Price, each .....\$0.75

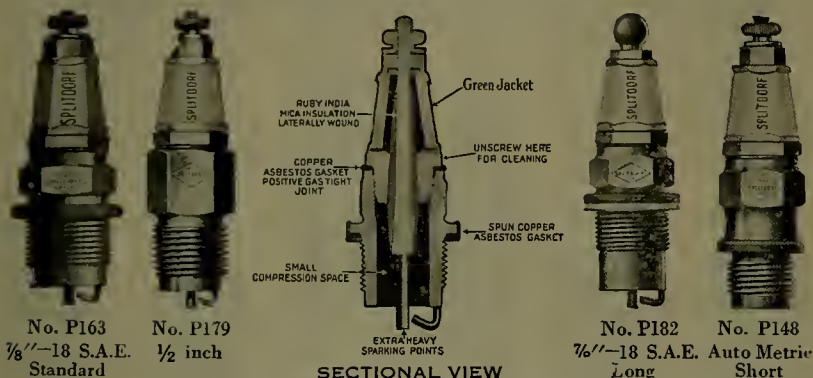
ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



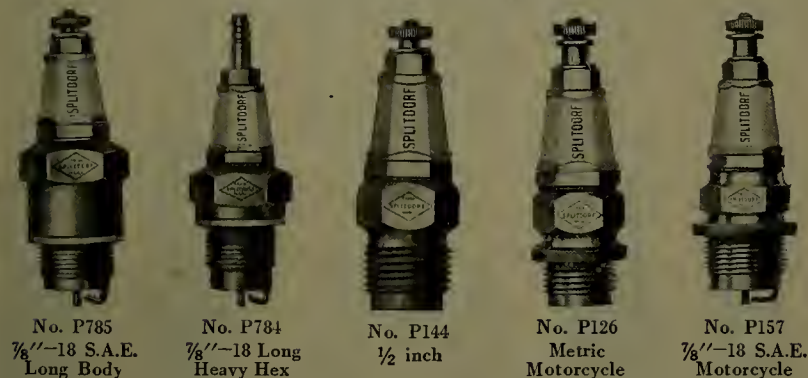
# SPLITDORF SPARK PLUGS

## The Plug with the Green Jacket

Made in a variety of types—in standard sizes and of special dimensions to suit engines of every make—the keynote of the highest quality is sounded in the whole line of Splitdorf Plugs. They are as nearly soot-proof, leak-proof and unbreakable as human ingenuity can make them.



Imported mica of the highest grade known is used exclusively as insulation in Splitdorf Plugs, and this enables them to withstand the breaking-down effects of high-tension current.



Splitdorf Plugs were originally designed for the hardest kind of usage, and how well they have "stood up" to the terrific tests of speed and endurance in years of service in every make of internal combustion engine and in all quarters of the globe, is testified to in the general demand for increasing millions.

Price, each ..... \$1.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

**AC CICO**

75c Each

No. ---  
Reg.  $\frac{7}{8}$ "

Reg. equipment on Dort,  
Federal Truck, Hudson,  
Hupp, Liberty, Paterson,  
Paige Pilot, G. M. C.

No. ---  
Reg. S.A.E.

Standard  $\frac{7}{8}$   
18 thread  
with small  
body Reg.  
ular equip-  
ment on all  
Saxon Cars

No. ---  
Dodge

Slightly  
longer than  
Reg.  $\frac{7}{8}$  in.  
Made espe-  
cially for  
Dodge Bro-  
thers Ex-  
clusive equip-  
ment on all their  
cars

**AC****Spark Plugs***The Standard Quality  
Plugs of America*No. ---  
Reg.  $\frac{1}{2}$  in.

Extra long  
porcelain  
great length  
of insulation  
to withstand  
oil and car-  
bon Suit-  
able for  
Ford Over-  
land and  
Studebaker

No. ---  
Long  $\frac{1}{2}$  in.

Reg. equip-  
ment on Reo  
Cars and  
Trucks the  
correct size  
for Over-  
land to 14

**AC CICO**

75c Each

No. ---  
Long  $\frac{7}{8}$ "

Reg. equipment on  
Chevrolet 490  
Recommended for  
Harley-Davidson

No. ---  
Ex. Long  $\frac{7}{8}$ "

Recom-  
mended for  
Metz

No. ---  
Metric

Suitable for  
Motorcycle  
and all  
Foreign and  
Domestic  
Cars being  
standard  
Metric  
plugs.

**AC STANDARD PLUGS**

Two-Piece

**AC Porcelains**No. ---  
Long  $\frac{1}{2}$ "

Long  $\frac{1}{2}$  in.  
Popular for  
Overland cars  
up to 1914

No. ---  
Reg.  $\frac{1}{2}$  in

Long insula-  
tion, suitable  
for Ford, Over-  
land and  
Studebaker

AC Porcelain 35c for all  
plugs up to 1912  
AC-1 Porcelain 35c  
AC-2 Porcelain 35c  
AC-2 C. P. Porcelain 50c

No. ---  
Reg.  $\frac{7}{8}$ ,  $\frac{1}{2}$  &  
Metric

Stand. AC 1 00  
 $\frac{7}{8}$  in. &  
Metric Equip-  
ment on Singer,  
Locomobile, Old  
Reliable Trucks,  
Wilcox Trucks,  
Riker Trucks.

No. ---  
Long  $\frac{7}{8}$ "

Designed for '08  
Buick. Regular  
equip on all  
Buick cars up  
to '14 A very  
large seller

**ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.**

**AC TITAN**

\$1.00 Each

No. ....  
Long  $\frac{3}{8}$  in.**A C****AC TITAN**

\$1.00 Each

No. ....  
Reg  $\frac{3}{8}$  in.**Spark Plugs***The Standard Quality  
Plugs of America***Carbon Proof Plugs**

One of largest sellers, regular equipment on Buick 6, Chevrolet 8, McLaughlin, Can., Scripps-Booth, Samson Tractor.

No. ....  
Long Body  $\frac{3}{8}$ No. ....  
Reg. S. A. E.

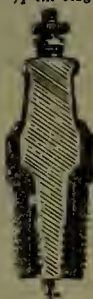
For motors requiring longer body plug. Regular equipment on Chandler, Crane-Simplex, White, Jackson, Stephens, Moreland Truck.

No. ....  
Metric

Recommended for Peerless 1915, Pierce-Arrow 1915, all cars using Metric plugs.

No. ....  
Long Metric

Length  $\frac{3}{8}$  in from gasket shoulder to firing point. Reg equipment on Scripps-Booth 8

No. ....  
AC TITAN  
 $\frac{1}{2}$  in. RegNo. ....  
AC STANDARD  
 $\frac{1}{2}$  in. Reg**One Piece Type Separable Type**

For Ford, Overland, Studebaker or any motor using a  $\frac{1}{2}$  in Reg Plug

This is not an ordinary Plug — you can sell four of these Plugs where ordinarily you sell but one. The Reason—

A deposit of carbon on the smooth surface of the porcelain is what causes a short circuit. The carbon proof porcelain is provided with a number of ribs having saw tooth edges which attain a sufficiently high degree of heat to burn away the carbon, thereby keeping the edges free from deposits and breaking up any possible short circuit

Regular equipment on Buick 14 cyl 35) Cole Cadillac Chalmers Davis Gramm Bernstein G M C Jordan Kissel Kar Case Olds 8 Oakland 8 and 4 Stutz Packard, Peerless, Pierce Arrow Dorris, Westcott, Sanford Moline Knight National Anderson and many others

No. ....  
Long S. A. E

Same characteristics as Reg S A E. reg equip on Oakland 34 Apperson 8 Nash, Premier Olds-37

No. ....  
L. Body Metric

Extra long body Metric plug for French Renault

No. ....  
Long  $\frac{1}{2}$  in

For Overland up to 1914 and Winton to 1915

No. ....  
Short Metric

Reg equipment Peerless Truck, correct size for Packard Cars and Trucks up to 1915, and for White.

**"Special Terminals"  
Furnished Grati**

Stewart-Knight



Walcott-Knight



Hatzel-Knight



Franklin



Motorcycle

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

**Sootless**

Will not soot. Double explosion chamber, sparking points extended well into the mixture, giving extra hot spark. All brass. All sizes.

Each .....\$1.50

**Rajah**

Has been a standard porcelain type of plug for a number of years, of recognized quality.

All Sizes:

Price, each ...\$1.50  
Porcelain only. .50

**RAJAH GIANT**

Price, each ....\$1.75  
Porcelain only. .60

**Spit-Fire**

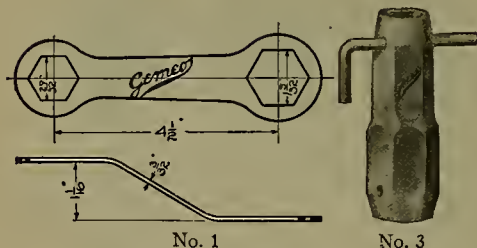
Has a prominent place among car manufacturers for equipment.

Regular Type

Price, each .....\$1.00

**Golden Giant****THE GOLD PLATED PLUG.**

Blue Adamant Insulator will not break and not affected by heat. Pure nickel Electrode that will not burn, corrode or warp. All sizes, each ....\$1.00

**Spark Plug Wrenches**

No. 1 is a steel stamping; No. 3 a casting. Both wrenches will accommodate all standard spark plugs. One end of each wrench is made to fit the regular 1/2-inch plug, while the other fits any A. L. A. M. plug with the large shoulder. This double end feature makes the wrenches doubly valuable and obviates the necessity of handling several sizes.

Each

No. 1. Pressed steel, white nickel finish.....\$0.15  
No. 3. Cast type, white nickel finish, 3/4x1 in... .30  
No. 4. Cast type, white nickel finish, 7/8x1 1/8 in... .30

**Copper Asbestos Gaskets**

Copper washer lined with asbestos, to be used in connection with spark plugs.

No. 1138 for 1/2 in. stand.  
Per dozen .....\$0.18

No. 1137 for Metric.  
Per dozen .....\$0.18

No. 1138A for 3/8 in.  
Per dozen .....\$0.18

**Champion Minute Spark Plug Cleaner**

The Champion Spark Plug Cleaner makes a quick, clean job of a long, mean one.

Instead of taking the plugs apart, laboriously scraping off the carbon and soiling hands and clothing—

You simply half fill the glass tube of the cleaner with gasoline, screw the plug into the socket and shake it vigorously.

Little flying needles, loose in the tube, pick the carbon off in small particles and clean the plug more thoroughly and quickly than you could possibly do it in the old way. Packed in neat wooden box.

Price, each .....\$0.75



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



# Packard

## Protected Cable

### IGNITION

SAMPLES SHOWN ARE EXACT SIZE

#### COMBINATION HIGH TENSION CABLE



Suitable for wiring a single set of batteries

#### COMBINATION HIGH TENSION MAGNETO CABLE



Popular for wiring a single set of batteries

#### PLAIN HIGH TENSION CABLE



For wiring a single set of batteries unprotected cable

#### COMBINATION LOW TENSION CABLE, 1-STRAND



Standard for wiring a single set of batteries

#### COMBINATION LOW TENSION CABLE, 2-STRAND



Replaces two single cables

#### COMBINATION LOW TENSION CABLE, 3-STRAND



Suitable for wiring a double set of batteries

#### COMBINATION LOW TENSION CABLE, 4-STRAND



Specially suited for wiring a double set of batteries from coil to timer

#### PROTECTION

against the injurious action of Oil is built into every strand of this cable. Good service is the result.

#### DATA

Outside Diam.  
31/64ths inches  
List Price  
20¢ per foot.

Outside Diam.  
23/64ths inches  
List Price  
20¢ per foot.

Outside Diam.  
18/64ths inches  
List Price  
16¢ per foot.

Outside Diam.  
15/64ths inches  
List Price  
10¢ per foot.

Outside Diam.  
28/64ths inches  
List Price  
22¢ per foot.

Outside Diam.  
31/64ths inches  
List Price  
33¢ per foot.

Outside Diam.  
34/64ths inches  
List Price  
44¢ per foot.

THESE ARE SEVEN OF THE 28 STYLES AND SIZES REGULARLY MADE.

# *Packard*

## Protected Cable

### LIGHTING

SAMPLES SHOWN ARE EXACT SIZE

COMBINATION LIGHTING CABLE, NO. 14, 1-STRAND



Recommended for wiring all an small e'de lamps

COMBINATION LIGHTING CABLE, NO. 12, 1-STRAND



Recommended for wiring large side or small head lamps

COMBINATION LIGHTING CABLE, NO. 12, 2-STRAND



Replaces two single cables, making neater job

COMBINATION LIGHTING CABLE, NO. 12, 3-STRAND



Replaces three single cables, making neater job.

COMBINATION LIGHTING CABLE, NO. 10, 1-STRAND



Suitable for wiring large head lamps

COMBINATION LIGHTING CABLE, NO. 8, 1-STRAND



Suitable for wiring from battery to distributing switch

COMBINATION STARTING CABLE, NO. 4, 1-STRAND



Suitable for wiring battery to starting motor of small car

#### PROTECTION

against the drying-out effect of Heat is one reason why this cable makes good in service.

#### DATA

Outside Diam.  
15/64ths Inches  
List Price  
10¢ per foot.

Outside Diam.  
16/64ths Inches  
List Price  
11¢ per foot.

Outside Diam.  
30/64ths Inches  
List Price  
24¢ per foot.

Outside Diam.  
32/64ths inches  
List Price  
36¢ per foot.

Outside Diam.  
18/64ths Inches  
List Price  
12¢ per foot.

Outside Diam.  
19/64ths Inches  
List Price  
13¢ per foot.

Outside Diam.  
29/64ths inches  
List Price  
19¢ per foot.

SPECIAL CABLES AND CABLE ASSEMBLIES MADE ON ORDER.



Illustrations  
Show Exact  
Size of  
Cable.

## IGNITION

Packard Jr. cable fills the big demand for a high grade absolutely reliable cable at popular prices.

It is second only in quality to Packard first grade cable and is greatly superior to any other cable sold at similar prices.

It is made in all styles and sizes to take care of all wiring conditions in automobile, motor boat, aeroplane and other gasoline engines.

### DATA



PACKARD JUNIOR SECONDARY DIAMETER  $\frac{1}{2}$  IN.

Suitable for all Kinds of Severe High Tension Service

Outside Diam.

$\frac{1}{2}$  inch

List Price

\$147.00 per

1000 feet



PACKARD JUNIOR SECONDARY DIAMETER  $\frac{3}{8}$  IN.

Best Size for Magneto Terminals

Outside Diam.

$\frac{3}{8}$  inch

List Price

\$94.00 per

1000 feet



PACKARD JUNIOR PLAIN SECONDARY DIAMETER 7 M. M.

A Popular Style Where Plain Cable Is Required

Also Made In 9 and 10 M. M.

Outside Diam.

7 M. M.

List Price

\$58.00 per

1000 feet



PACKARD JUNIOR PRIMARY DIAMETER  $\frac{7}{32}$  IN.

Standard for all Kinds of Low Tension Service

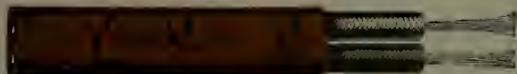
Outside Diam.

$\frac{7}{32}$  inch

List Price

\$42.00 per

1000 feet



PACKARD JUNIOR PRIMARY 2 CONDUCTOR

Replaces Two Single Cables, Making a Neater Job

Also Made in 3-Conductor Style

Outside Diam.  
 $\frac{14}{64} \times \frac{25}{64}$  inch

List Price

\$87.00 per

1000 feet



PACKARD JUNIOR PLAIN PRIMARY DIAMETER 5 M. M.

For Low Tension Service Where There is no Danger From  
Oil or Heat

Outside Diam.

5 mm.

List Price

\$27.00 per

1000 feet

SPECIAL CABLES AND CABLE ASSEMBLIES MADE TO ORDER



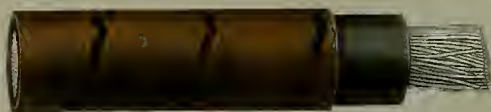
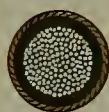
Illustrations  
Show Exact  
Size of  
Cable.

## STARTING and LIGHTING

The production of cable that will stand up under the extremely severe conditions found in automobile service necessitates not only first grade materials, but also long experience and a high order of mechanical excellence.

The specialized experience and facilities of the Packard Electric Company are second to none in the business.

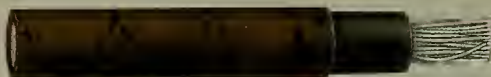
### DATA



PACKARD JUNIOR STARTING NO. 1

Suitable for Wiring Battery to Starting Motor of Large Car  
Also Made in 6 Other Sizes

Outside Diam.  
33/64 inch  
List Price  
\$326.00 per  
1000 feet



PACKARD JUNIOR STARTING NO. 4

Suitable for Wiring Battery to Starting Motor of Small Car  
Also Made in 6 Other Sizes

Outside Diam.  
24/64 inch  
List Price  
\$187.00 per  
1000 feet



PACKARD JUNIOR LIGHTING NO. 14-2 CONDUCTOR

Suitable for Wiring Side or Head Lamps  
Also Made in 3 Other Sizes

Outside Diam.  
23/64x13/64  
inch  
List Price  
\$87.00 per  
1000 feet



PACKARD JUNIOR LIGHTING NO. 12-1 CONDUCTOR

Suitable for Wiring Head and Side Lamps  
Also Made with 2 Conductors

Outside Diam.  
13/64 inch  
List Price  
45.00 per  
1000 feet



PACKARD JUNIOR LIGHTING NO. 10-1 CONDUCTOR

Suitable for Wiring Large Head Lamps  
Also Made with 2 Conductors

Outside Diam.  
14/64 inch  
List Price  
\$60.00 per  
1000 feet



### J. D. Terminals



The best snap-on terminal made. Will fit any plug. Easily attached to wire. Per doz.

No. 1 Primary, .315 in. ....	\$1.00
No. 2 Magneto, thin, .270 in. ....	1.15
No. 3 Magneto, thick, .315 in. ....	1.25
No. 4 Secondary, .510 in. ....	1.50

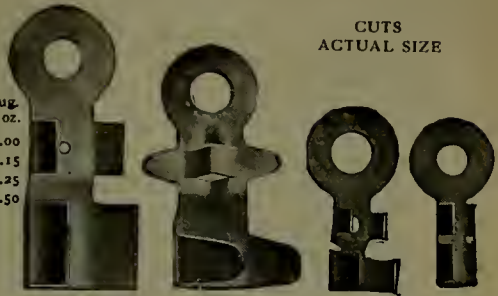
### Rajah Universal Terminal



A stiff snap on terminal for secondary wire. Will fit Rajah plug and any other plug made. Easily attached or detached. Will not become loose. No soldering required. Cut exact size. Price, per dozen.....\$1.25

### Climax Copper Terminals

CUTS  
ACTUAL SIZE



No. 3  
Secondary

No. 2  
Secondary

No. 1  
Primary

No. 0  
Primary

Per doz.

No. 0. For Small Primary .....	\$0.15
No. 1. For Primary .....	.20
No. 2. For Medium Secondary .....	.25
No. 3. For Secondary .....	.10

## AUTOMOBILE STARTING MOTOR AND LIGHTING GENERATOR BRUSHES



D6

D8

D13

E1

This line of pyramid brushes is manufactured by the National Carbon Co., Inc., and in a majority of cases are the same as were on your starting or lighting generators originally. They are standard brushes and are made for nearly every starting or lighting system on the market. In making brush replacements care must be taken to get the proper brushes, as they play a very important part in the automotive electric system. When ordering give code numbers if possible. If not, give name and model of car and name of starting system. In special cases where there is any doubt send sample of brush.

Owing to the large number of Starting Motor and Lighting Generator outfits now used on automobiles, it would be impossible to list in this catalogue every style of brush necessary to fit every machine. As a matter of fact, there are about 300 different sizes and styles of brushes used on the different types of starting motors and lighting generators. We are therefore showing in this catalogue only a few representative types used on cars more generally known. We can, however, supply brushes for every type of starter and generator on the market.

### ASSORTMENT NO. 20



The following assortments are offered covering only salable types and in stocks of various sizes and types.

The No. 20 Assortment illustrated is a small conservative stock of the most popular selling brushes, contained in a carton which makes an attractive display stand and which placed on your counter will greatly assist in increasing your sales.

No. 20. 15 types, 52 brushes, each.....	\$20.00
No. 21. 21 types, 69 brushes, each.....	25.10
No. 22. 33 types, 117 brushes, each.....	50.15
No. 23. 45 types, 217 brushes, each.....	100.03
No. 24. 45 types, 301 brushes, each.....	150.00
No. 25. 64 types, 376 brushes, each.....	200.70
No. 26. 74 types, 578 brushes, each.....	300.55
No. 27. 110 types, 871 brushes, each.....	501.05

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# ATWATER KENT-SCIENTIFIC-IGNITION FOR ELECTRICALLY EQUIPPED CARS ONLY



The simple A. K. contactless distributor. No rubbing surfaces or brushes

*Will NOT Use Dry Cells  
Economically*

This system is one of few moving parts (see illustrations) and those of the simplest possible construction. No magnets—just a simple high-grade device that does its work faithfully winter or summer, rain or shine, as long as your car holds together.



Note the simple accessible contact maker of the A. K. system

## Advantages of ATWATER KENT IGNITION Type CC (Closed Circuit System) Over Magneto

1. An intensely hot spark at all speeds, no matter whether motor is being slowly cranked or is racing at top speed.
2. Furnishes extra hot sparks at low speed, enabling car to idle smoothly and run at three or four miles an hour in high, accelerating with extreme rapidity when throttle is opened.
3. Pulls evenly and powerfully at slow speeds through traffic and over bad roads without stalling.
4. Its hot starting spark makes starting easier and lessens the strain on motor and battery.
5. Gear shifting reduced to minimum.
6. Practically fool-proof in construction—all moving parts reduced to a minimum and accessible for inspection.
7. Only one adjustment, and this is good for at least a season's use. Should any adjustment ever be necessary, an ordinary screwdriver is the only tool required.



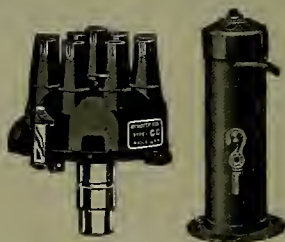
TYPE CC

Magneto Replacement Outfit  
Furnished for 4, 6 and 8 cylinder cars. It is particularly easy to install on Maxwell and Overland Cars.



Switch for Type CC

Mounted on lower edge of cowl with two small wood screws. No cutting of cowl necessary. Sold separately at \$1.35.



TYPE CC

For Vertical Installation  
To replace distributors on vertical distributor drive shaft of engine or vertical drive on generator.

### Prices of Systems for Magneto Replacement Including Switch

4 cylinder...\$24.00 6 cylinder...\$27.00  
8 cylinder...\$30.00

Shipping weight, 8½ pounds

### Directions for Ordering Magneto Replacement Systems

Specify name of car and number of cylinders.  
Note:—To use Type CC on 4 and 8 cylinder cars magneto must rotate clockwise when looking at coupling end of shaft of magneto. On 6 cylinder cars the CC system will operate rotating either way.

### Prices of Systems for Vertical Installation with Coil, Less Switch

4 cylinder...\$17.00 6 cylinder...\$18.00  
8 cylinder...\$21.00

Shipping weight, 5½ pounds

### Directions for Ordering

Give name, year and model of car. Specify number of cylinders and type of ignition now used.  
Note:—Vertical distributor drive shaft must rotate clockwise (same direction hands of a clock travel) to use this type excepting on 6 cylinder cars.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# ATWATER KENT SCIENTIFIC IGNITION

## Types K-2 and H for Cars NOT Electrically Equipped

Uses Ordinary Dry Cells Economically. At Least 2000 Miles Per Set. A Six-Volt Storage Battery Can Be Used



TYPE K-2

For replacing Magneto. Mounting is reversible, allowing for clockwise or counter-clockwise drive.



TYPE H

Type H is especially adapted to 2 and 4 cylinder Marine Engines.



TYPE K-2

For Vertical Installation



TYPE H

Type H is hand spark advance and Type K-2 is automatic spark advance

### SYSTEMS FOR MAGNETO REPLACEMENT

Type H-2 or 4 cylinder with Plate Switch Coil...	\$32.00
Type H-2 or 4 cylinder with Kick Switch Coil...	34.00
Type H-2 or 4 cylinder with Underhood Coil and separate Reversing Switch.....	34.00
Type K-2-2 or 4 cylinder with Plate Switch Coil.....	38.00
Type K-2-2 or 4 cylinder with Kick Switch Coil.....	40.00
Type K-2-2 or 4 cylinder with Underhood Coil and separate Reversing Switch.....	40.00
Type K-2-6 cylinder with Plate Switch Coil.....	41.00
Type K-2-6 cylinder with Kick Switch Coil.....	43.00
Type K-2-6 cylinder with Underhood Coil and separate Reversing Switch.....	43.00
Type K-2-8 cylinder with Plate Switch Coil.....	45.00
Type K-2-8 cylinder with Kick Switch Coil.....	47.00
Type K-2-8 cylinder with Underhood Coil and separate Reversing Switch.....	47.00



K-Plate Switch Coil



K-Kick Switch Coil



K-Underhood Coil

### SYSTEMS FOR VERTICAL INSTALLATION

Type H-2 or 4 cylinder with Plate Switch Coil.....	25.00
Type H-2 or 4 cylinder with Kick Switch Coil.....	27.00
Type H-2 or 4 cylinder with Underhood Coil and separate Reversing Switch.....	27.00
Type K-2-2 or 4 cylinder with Plate Switch Coil.....	31.75
Type K-2-2 or 4 cylinder with Kick Switch Coil.....	33.75
Type K-2-2 or 4 cylinder with Underhood Coil and separate Reversing Switch.....	33.75
Type K-2-6 cylinder with Plate Switch Coil.....	34.75
Type K-2-6 cylinder with Kick Switch Coil.....	36.75
Type K-2-6 cylinder with Underhood Coil and separate Reversing Switch.....	36.75
Type K-2-8 cylinder with Plate Switch Coil.....	38.75
Type K-2-8 cylinder with Kick Switch Coil.....	40.75
Type K-2-8 cylinder with Underhood Coil and separate Reversing Switch.....	40.75

### SYSTEMS FOR FORD CARS

Type K-2 with Kick Switch Coil.....	37.00
Type K-2 with Plate Switch Coil.....	35.00
Type H- with Kick Switch Coil.....	30.00
Type H- with Plate Switch Coil.....	28.00

The only difference between Kick and Plate Switch Coils is in the Switch. The Kick Switch has all parts enclosed and has a substantial lever which may be operated by the foot. Both Switches are equipped with starting button which gives a single extra hot spark for starting. This frequently enables the car owner to start "on the spark" without cranking.

### DIRECTIONS FOR ORDERING—Specify:

1. Make of car or motor.
2. Number of cylinders. If 2 cylinder state whether firing points shall be set at 90 or 180 degrees.
3. Will Unisarker be installed in place of magneto or on vertical timer-shaft in place of timer?
4. State whether rotation of ignition drive shaft, when looking at end on which ignition system is mounted, is clockwise or counter-clockwise.
5. When ordering system for Ford Car, simply state type of Unisarker desired, K-2 or H, and style coil, Plate Switch or Kick Switch coil.



TYPE H-Ford Outfit



TYPE K-2-Ford Outfit



Reversing Switch

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



# ATWATER KENT SCIENTIFIC IGNITION

TYPE K-3

## FOR THE TRACTOR

"A simple, foolproof ignition system that requires no skilled maintenance in the field—no expert to repair it."



The Simple Atwater Kent contactless distributor—no rubbing surfaces or brushes

Simple waterproof coil—no moving parts



Atwater Kent Ignition System Type K-3 for Tractors (shown without cover)



Ignition Switch Starting button furnishes extra hot spark for starting



Note simplicity of automatic spark advance mechanism

speed as with the magneto.

The spark is retarded when cranking, eliminating back-firing and its attending danger—yet it is automatically advanced for maximum power and economy according to the speed of the engine.

Current consumption is negligible. Current flows only during instant of spark. Six dry cells in series will give one season's unflinching operation. The system uses less current than your door bell or the tail lamp of your auto.

Impossible to exhaust cells by leaving switch "on," as interrupter contacts are always open except for the brief instant of spark—no current is used except when the motor is actually in operation.

Furnishes the big, hot, dynamic spark required by tractor motors at all speeds from cranking to maximum.

The same big spark when cranking (no matter how slowly) as at full speed is an inherent characteristic of the system and is not obtained by adding impulse devices, vibrators or other complicated mechanism. The spark beat does not vary with the motor

Extreme light weight of all moving parts, together with low bearing pressures, eliminates trouble from vibration and insures long life and maximum reliability without interruption.

Every detail of the Atwater Kent Tractor Ignition outfit is the result of years of careful scientific development. Only the best in manufacturing methods, material, men and machinery enter into its production.

Mounted on a base of standard magneto dimensions, the system can be easily installed on any existing tractor model.

Ten tractor manufacturers have adopted it as standard equipment. Several of these have already used it for two or more seasons.

Complete Type K-3 Unisparkler with Coil on Magneto Replacement Mounting. No switch.

2 cyl. Specify 90° or 180°.....	\$32.00
4 cyl. ....	32.00
6 cyl. ....	34.00
Kick Switch, complete with screws .....	4.00
Tractor ignition cover .....	1.50



Contact Maker Type K-3

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



# ATWATER KENT SCIENTIFIC IGNITION

## Parts Price List—Type CC Magneto Replacement System

Terminal Screw and Washer, 5c.

Rubber Washer, 2c.

Secondary Coil Terminal, 10c.

Unisarker Retaining Screw, 5c.

Coil Complete, \$7.00.

Coil Screws, 2c. each.

Advancer Rod, 25c.

Duc Coupling, 25c.

Distributor Terminal, 20c.

Distributor Cap with Terminals Complete  
4 cylinder, \$3.75  
6 cylinder, \$4.10  
8 cylinder, \$4.80

Distributor Cap without Terminals  
4 cylinder, \$2.75  
6 cylinder, \$2.90  
8 cylinder, \$3.00

Distributor Spring and Screw, 15c.

Distributor Block, Specify 4, 6 or 8 Cylinder, 50c.

Terminal Screw and Washer, 5c.

Shaft Key and Screw, 15c.

Cam Shaft with Spiral Gear,  
4 cylinder, \$1.50  
6 cylinder, \$1.75  
8 cylinder, \$3.00

Condenser Cover, 60c.

Condenser \$1.05

Base Casting, MM3, \$4.25

Contact Arm, \$1.00

Stationary Contact, 75c.

Insulated Screw and Washers (2), 5c. each

Contact Maker Complete (not including Cam Shaft), \$5.50

Unisarker Spiral Gear, attached less Gear Mounting and Coil  
4 cylinder, \$11.00  
6 cylinder, 12.00  
8 cylinder, 15.00

CC Switch Complete, \$1.35

CC Switch Plug, 30c.

When ordering parts mention Type CC Magneto Replacement Outfit and give number of cylinders.  
Type CC 4 cylinder Magneto Replacement Outfit, Complete, \$24.00  
Type CC 6 cylinder Magneto Replacement Outfit, Complete, 27.00  
Type CC 8 cylinder Magneto Replacement Outfit, Complete, 30.00

## Parts Price List—Type CC for Vertical Mounting

Rubber Washer, 2c.

Distributor Terminal, 20c.

Distributor Cap with Terminals  
4 cylinder, \$3.75  
6 cylinder, \$4.30  
8 cylinder, \$4.80

Distributor Cap without Terminals, 4 cylinder, \$2.75  
6 cylinder, \$2.90  
8 cylinder, \$3.00

Distributor Spring and Screw, 15c.

Distributor Block Complete (specify 2, 4 or 6 cylinder), 50c.  
8 cylinder Block has Longer Blades

Terminal Screw and Washer, 5c.

Shaft Key and Screw, 15c.

Cam Shaft with Collar,  
4 cylinder, \$1.50  
6 cylinder, \$1.75  
8 cylinder, \$4.50

Condenser Cover, 60c.

Condenser, 3.05

Contact Arm, \$1.00

Stationary Contact, 75c.

Insulated Screw and Washers (2), 5c. each

Contact Maker complete, (not including Cam Shaft), \$5.50

Base Casting, \$4.15

Distributor Clamp and Pin, 15c.

Collar (only), 75c.

ATWATER KENT TYPE CC MADE U.S.A.

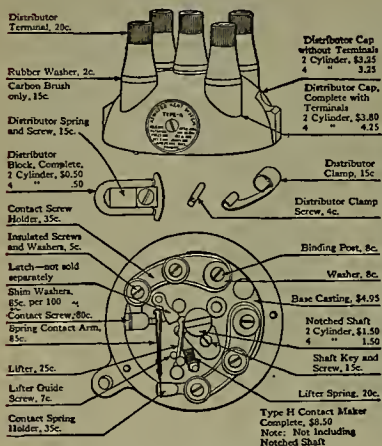
When Ordering Parts Specify Name, Year and Model of Car

Type CC—4 cylinder Unisarker for Vertical Mounting	\$11.00
Type CC—6 cylinder Unisarker for Vertical Mounting	12.00
Type CC—8 cylinder Unisarker for Vertical Mounting	15.00
Type CC—6 volt Coil	7.00
Type CC—12 volt Coil	7.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# ATWATER KENT SCIENTIFIC IGNITION

## Parts Price List Type H



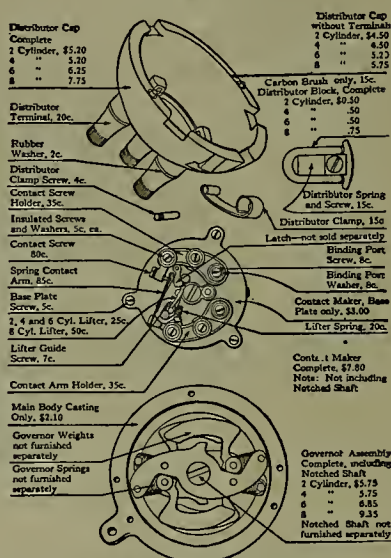
## TYPE H AND K-2 COILS, COIL PARTS, ETC.

Under Hood Coil complete (no switch).....	Each	\$9.50
Plate Switch Coil complete.....	"	10.75
Kick Switch Coil complete.....	"	12.75
Coil Binding Posts, large nuts.....	"	.05
Coil Binding Posts, small nuts.....	"	.05
Secondary Terminal Insulator.....	"	.25
Reversing Switch complete.....	"	3.25
Reversing Switch Plug.....	"	.15
Switch Lever for Plate Switch Coil.....	"	.25
Starting Lever for Plate Switch Coil.....	"	.25
Switch Key for Kick Switch Coil.....	"	.15
Starting Button for Kick Switch Coil.....	"	.05
Starting Handle for Kick Switch Coil.....	"	.50

## Assembled Distributors

Type K-2—2 and 4 cyl. complete.....	Each	\$21.00
Type K-2—6 cyl. complete.....	"	24.00
Type K-2—8 cyl. complete.....	"	28.00
Type H—2 cyl. complete.....	"	14.25
Type H—4 cyl. complete.....	"	14.25
Type H—Ford System, less coil.....	"	17.25
Type H—Ford Unisarker, less coil, brackets and gears.....	"	14.25
Type K-2—Ford System, less coil.....	"	24.25
Type K-2—Ford Unisarker, less coil and engine cover.....	"	21.00

## Parts Price List Type K-2



## TYPE H FORD BRACKET AND GEARS

Bracket Casting.....	\$2.20
Two Gears.....	@ \$1.00 2.00
Advance Rod.....	.40

## TYPE K-2 FORD GEAR COVER AND GEARS

Casting (only), no Gears.....	\$2.50
Spiral Gears, per pair.....	2.00

If in need of notched shaft, or any parts for governor, order complete governor. If in need of latch or driven pins for contact maker, order base plate with latch and driven pins. Return old assembly—credit will be issued according to condition.

## Note—Instructions for Ordering Parts

In ordering parts of any kind, specify type of system, number of cylinders and direction distributor shaft rotates when looking down on top of the distributor and name of car.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## CONNECTICUT IGNITION

Model 15 and 15T Igniter Parts. G. O. Coil

M-15 4, 6 & 8 Cyl.  
IgniterM-15T 4 & 6 Cyl.  
Igniter4 & 6 Cyl.  
G. O. Coil297-F 4 Cyl.  
284-F 6 Cyl.  
288-F 8 Cyl.  
Case150-F 4 Cyl. Case  
151-F 6 Cyl. Case

M-14 Breaker Box

687-F 4 Cyl. M-15  
343-Y 6 Cyl. M-15  
Breaker Box687 1/2-F M-15T  
Breaker Box

M-15 Drive Base

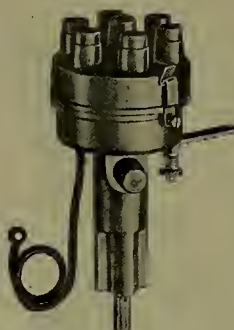
147-F  
Distributor Arm274-F 4 Cyl.  
275-F 6 Cyl.  
Distributor Arm672-F 4 Cyl. M-15  
Passing Contact  
Distributor Arm673-F 6 Cyl. M-15  
674-F 8 Cyl. M-15  
Passing Contact  
Distributor Arm

	Prices		Prices
Model 14 Breaker Box .....	\$3.50	674F 8 cyl. Model 15 Passing Con-	
Model 15 Igniter, 4 cyl. ....	10.50	tact Distributor Arm .....	\$1.30
Model 15 Igniter, 6 cyl. ....	11.00	687F Model 15 Breaker Box.....	3.00
Model 15 Igniter, 8 cyl. ....	12.00	G. O. Coil, 4 & 6 cyl. ....	10.00
274 F 4 cyl. Distributor Arm.....	1.00	M-15 Drive Base .....	5.00
275F 6 cyl. Distributor Arm.....	1.00	147F 4 & 6 cyl. Model 15T Dis-	
284F 6 cyl. Model 15 Distributor		tributor Arm .....	.75
Case .....	2.95	150F 4 cyl. Model 15T Distributor	
288F 8 cyl. Model 15 Distributor		Case .....	2.75
Case .....	3.20	151F 6 cyl. Model 15T Distributor	
297F 4 cyl. Model 15 Distributor		Case .....	3.00
Case .....	2.50	504 Model 15T Igniter, 4 cyl.....	10.50
672F 4 cyl. Model 15 Passing Con-		506 Model 15T Igniter, 6 cyl.....	11.00
tact Distributor Arm .....	1.30	687 1/2F Model 15T Breaker Box..	3.00
673F 6 cyl. Model 15 Passing Con-			
tact Distributor Arm .....	1.30		

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## CONNECTICUT IGNITION

Model 16 and 16C Igniter Parts. G. A. Coil

M-16 4, 6, 8 Cyl.  
IgniterM-16C 4 & 6 Cyl.  
Igniter4 & 6 Cyl.  
G. A. Coil1230-F Case, 4 Cyl.  
1231-F Case, 6 Cyl.  
1232-F Case, 8 Cyl.1226-F  
Distributor Arm1236-F 4-6 Cyl.  
1262-F 8 Cyl.1261-F  
Vaseline Cup

M-16 Drive Base

1220-F  
Advance Lever1252-F  
Slip TerminalT885-F  
Terminal

## MODEL 16

## Prices

604 Model 16 4 cyl. Igniter.....	\$10.50
606 Model 16 6 cyl. Igniter.....	11.00
608 Model 16 8 cyl. Igniter.....	12.00
T885-F 7MM Elbow Terminal....	.25
1226-F 4 & 6 cyl. Model 16 Dis- tributor Arm .....	.75
1230-F 4 cyl. Model 16 Distributor Case .....	2.50
1231-F 6 cyl. Model 16 Distributor Case .....	3.00
1232-F 8 cyl. Model 16 Distributor Case .....	3.20
1236-F 4 & 6 cyl. Model 16 Breaker Plate .....	3.00
1261-F Model 16 Vaseline Cup....	.15
1262-F 8 cyl. Model 16 Breaker Plate .....	3.50
1263-F 8 cyl. Model 16 Distributor Arm .....	.75

## MODEL 16C.

## Prices

G. A. 4 & 6 cyl. Coil .....	\$10.00
Model 16 Drive Base .....	5.00
704 Model 16-C 4 cyl. Igniter....	10.50
706 Model 16-C 6 cyl. Igniter....	11.00
1220-F Advance Lever .....	.12
1226-F Model 16-C Distributor Arm	.75
1230-F 4 cyl. Model 16-C Distrib- utor Case .....	2.50
1231-F 6 cyl. Model 16-C Distrib- utor Case .....	3.00
1236-F 4 & 6 cyl. Model 16-C Breaker Plate .....	3.00
1252-F Model 16-C Secondary Slip Terminal .....	.04
1261-F Model 16-C Vaseline Cup..	.15

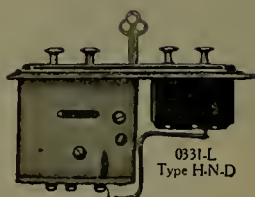
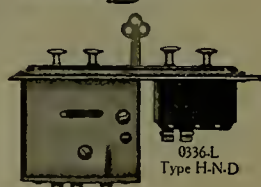
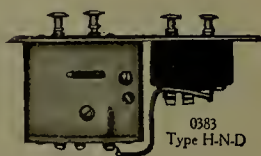
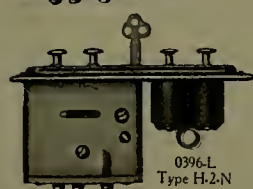
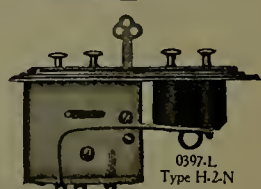
ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## CONNECTICUT IGNITION

## AUTOMATIC SWITCHES

Types H, H-N-D, H-2-N and O

0350  
Type H0310  
Type O0331-L  
Type H-N-D0333-L  
Type H-N-D0383-L  
Type H-N-D0336-L  
Type H-N-D0337-L  
Type H-N-D0335-L  
Type H-N-D0383  
Type H-N-D0375  
Type H-N-D0396-L  
Type H-2-N0397-L  
Type H-2-N

Number	Type	Prices	Number	Type	Prices
0310	O, without case .....	\$7.00	0350	H. ....	\$5.00
0331-L	H. N. D. ....	7.00	0375	H. N. D. ....	6.25
0331½-L	H. N. D. ....	7.00	0383	H. N. D. ....	6.25
0333-L	H. N. D. ....	7.00	0383-L	H. N. D. ....	7.00
0335-L	H. N. D. ....	7.00	0396-L	H. L. N. ....	7.00
0336-L	H. N. D. ....	7.00	0397-L	H. L. N. ....	7.00
0337-L	H. N. D. ....	7.00			

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## THE DIXIE MAGNETO

is a distinctly new type of magneto and has nothing in common with the old rotary armature idea, nor is it like any of the known inductor types.

The simplicity features of construction stand out prominently here, in that there are no revolving windings, an important detail entirely differing from the orthodox high tension instrument.

This simplicity becomes instantly apparent when it is found that the circuit breaker, instead of revolving as it does in other types is stationary and that the whole breaker mechanism is exposed by simply turning the cover spring aside and removing cover. This makes inspection and adjustment particularly simple, and the fact that no special tool is necessary for adjustment of the platinum points—an ordinary small screw driver is the whole "kit of tools" needed in the work of disassembling or assembling the DIXIE—further accentuates this simplicity.

With dust and water-protecting casing removed and one of the magnets withdrawn, the winding can be seen with its core resting on the field pole pieces and the primary lead attached to its side. An important feature of the high tension winding is that the heads are of insulating material, and there is not the tendency for the high tension current to jump to the side as in the ordinary armature type magneto.

A screw driver is the only tool needed on a Dixie Magneto.

### To Avoid Delay in Delivery

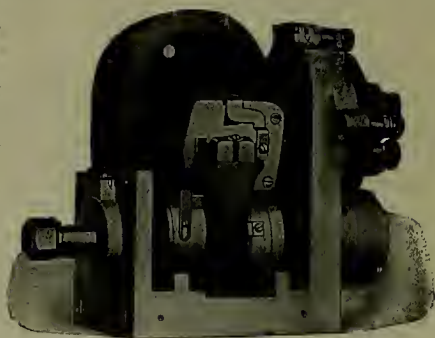
The following particulars must be given when ordering:

Type of magneto.

Direction of rotation of the shaft looking from drive end of the magneto.

Position of the timing lever looking from the drive end of magneto (whether on right or left hand side).

No. 44, 4 cylinder, each .....\$60.00  
No. 64, 6 cylinder, each ..... 75.00



Dixie Simplicity.

With water and dust protecting casing removed and one of the magnets withdrawn.

Its striking features are marked efficiency, great mechanical simplicity and long life of operation.

## NEW YORK BOX COILS



Model 55 Vibrating

Thoroughly reliable in every way. Used on stationary and marine engines using jump spark ignition. Water-proof.

No. 55. One cylinder .....\$4.50  
No. 56. Two cylinder ..... 8.50

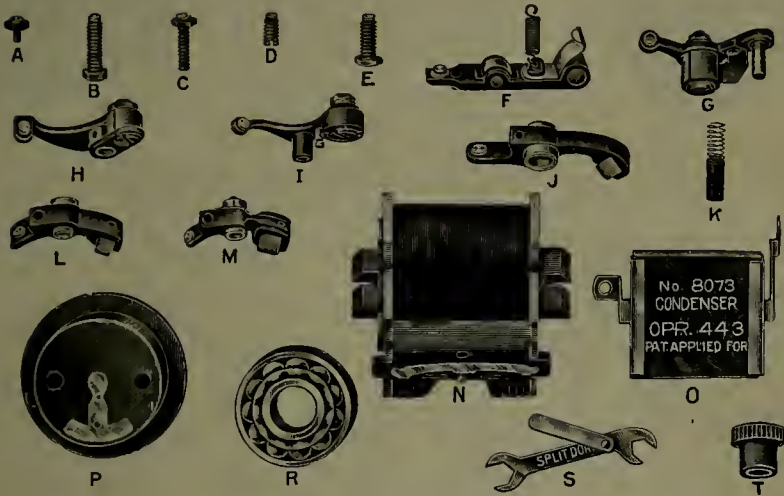


Model 50 M and B

They have proven superior to any other make and break coil so far produced. Put up in oak cases, filled with our special water-proof insulating compound.  
Each .....\$3.25

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# GENUINE AND MAGNETO PARTS



- A. Platinum Rivet, Part No. 2715. For all low tension models.
- B. Platinum Screw, Part No. 2716. For models A, B, D, F, C, H, O, S, SS, T, W, X, Y, Z, AW, AX.
- C. Platinum Screw, Part No. 2644. For models EU-EV-EU4, EU4-2 and Mag-Dynamo.
- D. Platinum Screw, Part No. 8050. For DIXIE models 40, 42, 43, 44, 442, 46, 462, 60, 63, 64 and 66. Part No. 9393. For DIXIE models 441, 48, 481, 482, 612, 83, 84, 85, 86, 88 and 124.
- E. Platinum Screw, Part No. 4210. For DIXIE model M-1 and M-2.
- F. Breaker Bar with Platinum, Part No. 313A. For models B, D, C, S, SS.
- G. Breaker Bar with Platinum. Part No. 802A. For models A, AW, AX, F, H, O, T, W, X, Y, Z.
- H. Breaker Bar with Platinum, Part No. 1477A. (RH). 1678 (LH) for models EU, EV, EU4.
- I. Breaker Bar with Platinum, Part No. 3160. (RH). 3176 (LH) for models EU4, EU4-2, and Mag-Dynamo.
- J. Breaker Bar with Platinum, Part No. 4121. For models DIXIE M-1 and M-2.
- K. Brush complete with Spring, Part No. 9433. Carbon Brush for models DIXIE 40, 42, 43, 44, 442, 46, 462, 48, 60, 63, 64, 642, 80, 81, 82, 83, 84, 85, 86, 88, 120, 121, 124. Part No. 9111. Carbon Brush (Crooved) for models DIXIE 43, 44, 441, 442, 46, 462, 481, 63, 64, 642. Part No. 9939. Carbon Brush (Square) for models DIXIE 612. Part No. 9573. Carbon Brush (Square) for model DIXIE 441, 481. Part No. 1492A. Carbon Brush for Mag-Dynamo, EU, EV and EU4. Part No. 2724-A. Carbon Brush for models A, AW, AX. Part No. 200-A. Carbon Brush for models W, X, Y and Z. Part No. 296-A. Gauze Brush for models B, D, C, S and SS. Part No. 297-A. Gauze Brush for models F, H, O, T, W, X, Y, Z. Part No. 1726-A. Copper Brush for models W, X, Y, Z, A, AW, AX.
- L. Breaker Bar with Platinum, Part No. 8061. For model DIXIE 40, 42, 60.
- M. Breaker Bar with Platinum. Part No. 8440 (with flat bumper); Part No. 9161 (with curved bumper) for models DIXIE 43, 44, 46, 462, 64, 66. Part No. 9400 (with flat bumper); Part No. 9696 (with curved bumper) for models DIXIE 441, 48, 481, 482, 612, 83, 84, 85, 86, 88 and 124. Part No. 19062 (LH); Part No. 19096 (RH); for models DIXIE 800, 825.
- N. H. T. Windings. Part No. 8041, for DIXIE models 40, 60, 43, 642, 42. Part No. 8698, for DIXIE models 44, 441, 442, 46, 462, 463, 64, 63. Part No. 4161, for models DIXIE M-1 and M-2.
- O. Condensers. Part No. 8073. For models DIXIE 40, 42, 43, 44, 441, 442, 46 and 462, 60, 63, 642, 64. Part No. 4218. For models DIXIE M-1 and M-2.
- P. Distributor Discs. Part No. 2723. For models A, B, D, F, O, T, W, X, Y, AW, AX. Part No. 177S. For models S, SS and Z. Part No. 3039. For models EU4 and EU4-2. Part No. 9366. For DIXIE 43, 44, 442, 46, 462, 48. Part No. 9136. For R, H, and Part No. 9901 for LH rotation DIXIE models 43, 44, 442, 46 and 462, WHEN USED WITH AVS COIL.
- R. Ball Bearings. Part A-363. For models A, AW, AX, W, X, Y, Z, EU, EV, EU4 and all DIXIE models. Part No. 363. For models B, D, F, G, H, O, S, SS and T.
- S. Magneto Wrenches. Part No. 2682 for H. T. Magnetos. Part No. 2682-A for L. T. Magnetos.
- T. Thumb Nut for Distributor Block. Part No. 2710, for all DIXIE models, and EU4, EU4-2, A, AW and AX.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



STARTING TYPE



LIGHTING TYPE

## THE GUARANTEED COLUMBIA STORAGE BATTERY

The "Guaranteed" Columbia Storage Battery is the product of the National Carbon Co., Inc. Years of experience in building batteries of all descriptions stand behind every Columbia, backed up by many real improvements in design and construction, which produces a battery qualified to give an unusually powerful and unequalled service.

The Columbia "Guarantee" is the only "Guarantee" which is based on an actual electrical output for a definite length of time.

The Columbia "Guarantee" is not a promise of an adjustment or a compromise (usually in favor of the adjuster); it is a Guarantee which is not IN FAVOR OF ANYONE—it is an actual definite "straight" Guarantee covering the life and performance (service) of every Columbia Battery.

### THE COLUMBIA GUARANTEE

Every COLUMBIA Starting and Lighting Battery (except the SE type) is guaranteed for one year, to be capable at any time during the guarantee period, of developing at least 80 per cent. of its original rated ampere hour capacity.

It is furthermore guaranteed when shipped from factory or an Official COLUMBIA Service Station:

To be free from inherent defects in workmanship and material.

The Company WILL MAKE GOOD this guarantee by replacement with another battery in first-class operating condition, should any battery of the types mentioned be returned to the factory or an official COLUMBIA Service Station, that has failed to fulfill the terms of the guarantee.

(The SE type battery is similarly guaranteed for six months.)

### A GUARANTEE WITHOUT PAYMENT BY THE PURCHASER FOR FULFILLMENT OF THE GUARANTEE

Columbia Storage Batteries of every size and shape are made for practically every automobile in use today.

The Columbia "Auto Equipment List," an alphabetical arrangement of all makes and models of automobiles, indicates the proper battery to be used, and batteries should, therefore, be ordered from this List.

When ordering, specify type of battery.

If ordered in any other way than from the "Equipment List" the make, year, model of car and type of starting and lighting system should be specified as well as any other data, especially in regard to type, number, terminals and cell arrangement of old battery, which may be available.

The Columbia "Auto Equipment List" will be furnished on request.



# COLUMBIA STORAGE BATTERY AUTO EQUIPMENT LIST

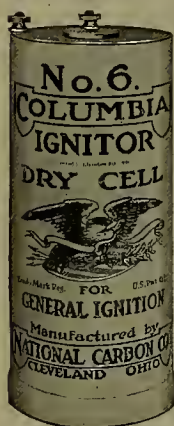
## PRICE LIST

Comparative Batteries		Order by Code	List Price
Former Nomenclature	New Nomenclature		
6-VOLT STARTING-LIGHTING BATTERY			
SW311AZ	R311AR	Faddy.....	\$42.50
SW311AY	R311AZ	Fagot.....	42.50
SW311DZ	D313DR	Faith.....	45.00
SW313AZ	D313AZ	Fancy.....	45.00
SW313AU	D313AO	Filmy.....	45.00
SW313AY	D313AR	Farce.....	45.00
SW313AV	D313AW	Fatal.....	45.00
SW313AT	D313AR	Fated.....	45.00
SW313DS	D313DE	Fault.....	45.00
SW313DY	D313DO	Feast.....	45.00
SW313DZ	D313DZ	Fauna.....	45.00
SW315AZ	D315AZ	Felly.....	50.50
SW315AV	D315AW	Filth.....	50.50
SW315AY	D315AR	Felon.....	50.50
SW315AW	D315AR	Femur.....	50.50
SW315DZ	R315DZ	Fenny.....	54.50
SW319AZ	D319AR	Fetid.....	61.50
SW319AY	D319AZ	Fever.....	61.50
SW319AV	D319AW	Field.....	61.50
SW319AW	D319XP	Fichu.....	61.50
SW323AZ	D319AZ	Figgy.....	61.50
SW323AY	D319AR	Fight.....	61.50
SW323DZ	H319SZ	Filly.....	61.50
SL311AZ	R311AZ	Fishy.....	42.50
SL311AP	R311AX	Fissi.....	42.50
SL311AU	R311AO	Fitch.....	42.50
SL311AT	R311AO	Fitty.....	42.50
SL311AR	R311AW	Field.....	42.50
SL311AS	R311AE	Firth.....	42.50
SL311DZ	D313DZ	Flaky.....	45.00
SL311JZ	R311AZQ	Flare.....	42.50
SL313AZ	R313AZ	Fleam.....	48.50
SL313AU	R313AO	Fleer.....	48.50
SL313AX	R313AZ	Fleck.....	48.50
SL313AT	R313AR	Fleet.....	48.50
SL313AP	R313AW	Flesh.....	48.50
SL313AS	R313AE	Flask.....	48.50
SL313DZ	R313DZ	Flint.....	48.50
SL313DU	R313DO	Flirt.....	48.50
SL313DS	R313DE	Fling.....	48.50
SL313DX	R313DW	Float.....	48.50
SL315AZ	R315AZ	Flosh.....	54.50
SL315AY	R315AW	Fluke.....	54.50
SL315AS	R315AE	Flora.....	54.50
SL315DX	R315DW	Fluff.....	54.50
SL315DZ	R315DO	Fluey.....	54.50
SE311AZ	R311AZ	Frisk.....	37.00
SE313AZ	R311AZ	Foist.....	42.50
SE313AS	R311AE	Focus.....	42.50
SE313AU	R311AW	Folly.....	42.50
SE315AZ	R313AZ	Forel.....	48.50
SE315AU	R313AO	Frame.....	48.50
SE315AR	R313AX	Frail.....	48.50
SE315AV	R313AW	Porte.....	48.50
SE315AY	R313AF	Forge.....	48.50
SE315AS	R313AE	Force.....	48.50
SE315DZ	R313DZ	Foxed.....	48.50
SE315DX	R313DW	Foyer.....	48.50
SE319JZ	E319JZ	Fried.....	57.00
SH311JZ	H311JZ	Fugue.....	39.50
SH311AZ	H313AZ	Frost.....	45.00
SH311AY	H313AR	Froth.....	45.00
SH313AZ	H313AZ	Furry.....	45.00
SH313AY	H313AR	Furzy.....	45.00
SH313AX	H313AR	Fusce.....	45.00
SH313DZ	H313DZ	Fusty.....	45.00
SH315AZ	H315AZ	Gamut.....	50.50
SH315AY	H315AR	Garth.....	50.50
SH315AX	H315AR	Gatch.....	50.50
SH315DZ	H315DZ	Gauze.....	50.50
SH315DY	H315DR	Gavel.....	50.50
SH319AZ	H319AR	Gelid.....	61.50
SH319AY	H319AZ	Gemel.....	61.50
SH319AX	H319AR	Genus.....	61.50
SH319AW	H319AZ	Geode.....	61.50
SH319DY	H319AZ	Genre.....	61.50
SH319DZ	H319SF	Genii.....	61.50
SH319DS	H319SE	Genet.....	61.50
SP311AZ	I311AR	Giant.....	45.00
SP311AY	I311AZ	Giddy.....	45.00
SP313JZ	I315AI	Girth.....	58.00
SP313JY	I315AFY	Glace.....	58.00
SP315AZ	I315AR	Gland.....	58.00
SP315AY	I315AZ	Glave.....	58.00

Comparative Batteries		Order by Code	List Price
Former Nomenclature	New Nomenclature		
8-VOLT STARTING-LIGHTING BATTERY			
SH415EZ		Glebe.....	\$76.50
12-VOLT STARTING-LIGHTING BATTERY			
SW67AZ	D67LVH	Gloam.....	\$56.50
SW67AW	D67LM	Gloome.....	56.50
SW67AY	D67KM	Gloat.....	56.50
SW67AS	D67KG	Ghint.....	56.50
SW67AX	D67KV	Globe.....	56.50
SW67AT	D67KM	Glory.....	56.50
SW67AU	D67MM	Gloom.....	56.50
SW69AZ	D69KR	Gnome.....	67.50
SW69AY	D69KZ	Godly.....	67.50
SW69AX	D69KR	Gonad.....	67.50
SW69AW	D69KW	Goner.....	67.50
SW69EZ	I69FXN	Grain.....	74.00
SW611AZ	I69URN	Goral.....	74.00
SW611AY	I69UZN	Cerge.....	74.00
SW613AZ	R611LR	Gourd.....	83.00
SW613AY	R611LZN	Gouty.....	83.00
SW615AZ	R611LRN	Grail.....	83.00
SL67AZ	R67KV	Grass.....	60.00
SL67AX	D67LV	Grate.....	56.50
SL67AW	D67LVH	Gravy.....	56.50
SL67AV	R67KK	Graze.....	60.00
SL69AZ	I69UX	Greet.....	74.00
SL69AX	D69KW	Grege.....	67.50
SL69EZ	I69FX	Grill.....	74.00
SL69EY	I69FZN	Grimy.....	74.00
SL611AZ	R611LRN	Groan.....	83.00
SL611EZ	I69FZN	Grope.....	74.00
SE67AZ	R67KV	Gruet.....	60.00
SE67AX	R67KM	Guano.....	90.00
SE67AY	D67LV	Guaco.....	56.50
SH67AZ	H67KV	Guilt.....	56.50
SH67AY	H67KM	Guise.....	56.50
SH67EZ		Gumbo.....	56.50
SH67GZ		Gusty.....	56.50
SH69AZ	H69LMU	Hades.....	67.50
SH69AY	H69LM	Haily.....	67.50
SH69GZ		Hanse.....	67.50
SH611AZ	H611KR	Harem.....	77.50
SH613AZ	H611KZ	Hatch.....	77.50
SH615EZ		Haven.....	97.50
SH615EY		Havoc.....	97.50
SP69AZ	I69UX	Heart.....	74.00
16-VOLT STARTING-LIGHTING BATTERY			
SW87AZ	D87PM	Heels.....	74.00
SW87AY	D87PMU	Heirs.....	74.00
SW87AX	D87PM	Helic.....	74.00
SW89AZ	D89RR	Helve.....	90.00
SW811AZ	D89RR	Hepat.....	90.00
18-VOLT STARTING-LIGHTING BATTERY			
SH97GZ	H97GM	Herse.....	\$81.00
SH99CZ	H99GM	Hills.....	100.00
SH99GZ	H99GM	Hilts.....	100.00
SH911GZ	H99GM	Hitch.....	100.00
24-VOLT STARTING-LIGHTING BATTERY			
SW125AZ		Hoist.....	84.00
SW125AY		Holly.....	84.00
SE127AZ	E127TM	Honor.....	105.00
SE127AY	E127TVU	Hoods.....	105.00
SE127LZ		Hoots.....	105.00
SH125HZ		Horse.....	84.00
SH125HY	H125H	Hosts.....	83.00
30-VOLT STARTING-LIGHTING BATTERY			
SW155AZ		Hover.....	\$100.00
6-VOLT LIGHTING BATTERY			
BW35AZ	BW35AZ	Jails.....	\$19.28
LW35AS	BW35AZ	Jelly.....	19.28
LW37AS	LW37LZ	Jcing.....	21.45
LW39AS	LW39AS	Jctus.....	26.70

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## COLUMBIA BATTERIES



Columbia Ignitors are the first batteries developed to take care of motor ignition and other heavy service work. Ignitors are so made that they will stand up under severe current drains, or if so desired, will give perfect satisfaction for light work.

In other words, ignitors are an all around battery, giving superlative service for heavy or light work. They should, however, always be used where a large amount of current is needed.

Columbia batteries can be equipped with Fahnestock spring clip binding posts at no extra charge. Only National Carbon Company batteries are so equipped.

Columbia batteries are packed 125 to a barrel.

No. 6 Ignitor, each .....\$0.30

## BATTERY CONNECTIONS

VELOX



Velox connectors are among the best on the market. Sufficient spring to lock the thumb nut, insuring perfect connection.

Cable can not pull out or fail to conduct full strength of current.

Price, per doz. ....\$0.25

VELOX SPRING



Beyond question the best battery connector on the market. Can be used as a snap on and will not come loose; also fastened with thumb nuts if desired.

Price, per doz. ....\$0.60

BULL DOG



Safe, strong and reliable. Dispenses with thumb nuts and all ignition troubles caused by loose battery connections. Snapped on in a second and as easily removed.

Price, per doz. ....\$0.60

## HYDROMETERS

*Break Not*



Patented construction which does away with glass to a great extent, making it possible to carry it in the tool box without danger of breakage.

Length, 12 inches.

Price, each .....\$1.00

## No. 1 Standard Grade



Length, 14 1/2 inches. Hydrometer scale, 10 to 40 Baume, and 1100 to 1400 Specific Gravity. 5-Graduation at 70 degrees F. Complete in hardwood box.

Price, each .....\$3.00

## LUTHY NON-BREAKABLE



Made from celluloid, this hydrometer is practically unbreakable. Hydrometer is plainly marked and easy to read.

Price, each .....\$1.50

## Gasoline Hydrometer



This instrument covers a range of Baume Scale from 60 to 80 degrees. It is contained in flannel bag, inclosed in glass testing jar, and encased in a round wooden carrying case 5 inches long by 1 inch diameter. Should be in every automobile kit.

No. 2064. Complete, each...\$0.50

## Gasoline Hydrometer Combined with Thermometer

Improved Gasoline Hydrometer for automobile kits, combined with thermometer and correction scale, for variations in temperature, complete with test jar. Wrapped in a soft flannel pouch with test jar in wood case.

No. 2065. Price, each.....\$1.50



## Freeze Meter No. 2

A hydrometer which shows the exact temperature at which solutions of denatured alcohol and water will freeze if temperature at time of test is 60 degrees Fahr. In flannel bag with test jar in wood box, 6 in. over all.

No. 2. Price, each.....\$0.75

## Battery Hydrometer

This instrument is for ascertaining the specific gravity of a solution, particularly electro light used in storage batteries registered with the Baume scale. Hydrometer and test tube come packed in wood case.

No. 1023. Price, each .....\$0.35



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## SWITCHES



Single Gang Type "N" Switch



2 Gang Type "N" Lighting Switch



3 Gang Type "N" Lighting Switch

This is the neatest, simplest and most easily installed switch on the market. All that is necessary is to bore a circular hole, or in case of a multiple gang switch, holes with  $\frac{1}{8}$  inch centers.

The body of each unit is made of a material that will resist most intense heat, and also may be subjected to rough usage.

The simple construction insures indefinite life.

One marked advantage is that the button is large enough to be operated with a gauntleted hand.

All switches are provided with terminals.

Furnished either brass or nickel finish.

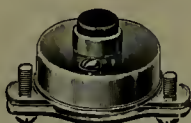
Primarily for lighting as pulling out the button closes an individual circuit and pushing it in opens the circuit. Multiple gang switches have a common bus bar for the battery wires.

Type	Mounting Plate	Price
1 pt.	1½ inches high x 1 inch wide	.....\$0.50
2 pt.	2 inches high x 2 5-16 inches wide	..... 1.00
3 pt.	1 11-16 inches high x 2 13-16 inches wide	... 1.50

Splitdorf  
Ground Switch

A special ground switch for high tension magneto. Well made with detachable key, nickel plated.

Price, each .....\$1.00

Velox  
Push Button Switch

Can be used on steering post, spider or rim of wheel. Especially adapted for automobile use, and may be used without clamp on a flat surface.

Brass or nickel finish.

Price, each .....\$0.50

Velox  
Two Point Switch

Made especially for use in connection with electric lamps on automobiles, gas, gasoline engines or motor boats; in fact any place where one or two sets of batteries are used.

Price, each .....\$0.25

## Tip Top Button Switch



Fore-Door Mounting



Flush Type Mounting

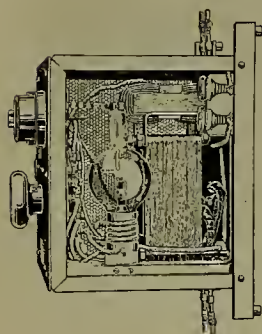
Is absolutely water, grease and dust proof. Hard brass is used for the metal portions, and no part is constructed of steel or iron, which would rust or otherwise deteriorate. The contact surface is about  $\frac{1}{8}$  inches in circumference. A single contact point push button becomes useless if one or both of the contact points corrode, unless it is dismantled and cleaned. If the entire surface of the "Tip-Top" Button were to corrode, it could instantly be cleaned by merely depressing the top, and giving it several slight turns to the right or left. Furthermore, all metal portions are either cast within the composition base and cap, or are so arranged that they cannot jar loose. This insures continuous good service in the presence of strong vibration. Fore-door, Flush or Steering wheel type.

Price, each ..... \$0.60

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## TUNGAR RECTIFIERS FOR RECHARGING STORAGE BATTERIES



Rectifier with Side Removed  
to Show Construction

Renewal Bulbs for any of above Rectifiers, each.....\$8.00

The 6 amp., 75 volt Tungar for use in public garages or battery service stations. Will put 80 amp. hours into ten 3-cell batteries at a cost of 5 to 10 cents a battery, depending on the cost of current.

The vital part of the Tungar is a small gas filled bulb containing a filament of Tungsten and a graphite anode.

Any number of three-cell batteries up to ten may be charged simultaneously, a dial switch being provided for adjusting the voltage to the number of batteries. The current is adjustable in steps to six amperes.

The enclosing case, made of Japanned sheet iron, has a panel on which are mounted an ammeter, switch and regulating handle.

Automatic operation. Should the current fail the charging circuit is automatically opened, making it impossible for batteries to discharge. On return of current charging is resumed.

Simplicity in construction and ease of operation makes it possible to use unskilled labor on battery charging, thereby reducing the cost materially.

<b>PRICES:</b>	
<b>6 Lamp,</b>	
<b>75 Volt,</b>	
60 cycle .....	\$130.00
40-50 cycle .....	
25-30 cycle .....	
125-133 cycle .....	

## TUNGAR RECTIFIERS FOR PRIVATE GARAGES

Recharge your own storage battery over night. Designed to change A. C. current to D. C. current, which is required to charge a battery.

Made in two sizes, small and large. The small size will charge a battery fully, but at a low rate, putting in a long soaking charge which is, as a rule, much better for the battery, particularly if it is a rather small one. The large rectifier is designed for putting in current at a rate three times as fast and will put in a substantial charge over night.



Small		Large	
2 amp., 60 cycle .....	\$18.00	6 amp., 60 cycle .....	\$28.00
2 amp., 40-50 cycle .....	20.00	6 amp., 40-50 cycle .....	34.00
2 amp., 25-30 cycle .....	25.00	6 amp., 25-30 cycle .....	36.00
Renewal Bulbs, each .....	3.00	Renewal Bulbs, each .....	7.00

## WAGNER ALTERNATING-CURRENT RECTIFIERS

Is suitable for charging small storage batteries from alternating current lighting or power circuits. As may be seen by the illustration, the device is small, compact, easily portable and comparatively light in weight.

The rectifiers are built for use on 60-cycle, 110-volt alternating current, and will operate at frequencies varying from 57 to 63 cycles. Two sizes may be furnished—3 ampere and 5 ampere direct current capacity, each of voltage capacity sufficient to charge a 3-cell battery.

As shown by the illustration, the rectifiers are built with and without indicating ammeter. The ammeter is not essential in the use of the rectifier, but is an added convenience in showing plainly at all times the operation of the device and the rate at which the battery is being charged.

3-ampere D. C. without ammeter .....	\$29.00
5-ampere D. C. without ammeter .....	
3-ampere D. C. with ammeter .....	\$36.00
5-ampere D. C. with ammeter .....	



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## DASH AMMETERS

### STERLING

Sterling Dash Ammeters are high grade instruments designed specially for automobile use. Provided with zero center scales, they show constantly the correct rate of battery charge or discharge.

They are of the permanent magnet, soft iron vane type, and are accurately calibrated and beautifully finished.

By use of a damping device a dead beat pointer is secured without any mechanical attachment and without sacrificing sensitivity.

The distribution of parts is so arranged that a constant magnetic force is maintained under all conditions. This enables the instrument to carry a very great temporary overload without suffering any injury.

No. 500-30F. Each .....\$3.00



### DONGAN

Dongan Dash Ammeters are high class instruments of the flush type nickel plated finish and add greatly to the appearance of the instrument board.

They are of the iron magnet type and there are no mechanical parts to get out of order. Although they are extremely simple in construction, they are also extremely accurate and can be depended on at all times.

Dongan ammeters are absolutely dead beat and from a zero centre have a range of 20 amperes charge or discharge, which will amply take care of the average automobile requirements.

Price, each .....\$2.00



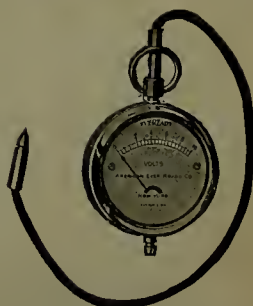
## POCKET METERS



No. 1002



No. 1003



No. 1005

These little meters are very simple in construction, having very few parts, in fact, so few as to eliminate troubles common with other makes of meters. The few parts are so sturdily made that there is absolutely nothing to get out of order.

They are absolutely dead beat; giving a correct reading instantly and regardless of whether the meter terminal is placed on positive or negative pole.

Standard finish polished nickel, dials of metal etched in black raised figures with dull silver background.

No. 1002—Ammeter, 0-35 amperes .....	\$1.25
No. 1003—Volt Ammeter, 0-35 amperes, 0-11 volts.....	1.75
No. 1005—Volt Meter, 0-10 volts .....	1.50
No. 1007—Coil Tester, 0-3 amperes .....	1.50
No. 1008—Coil Tester and Ammeter, 0-30 amperes.....	1.75

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## GLOBE STEEL TOOL AND BATTERY BOXES

For Automobiles, Cyclecars, Trucks, Tractors,  
Motor Boats, Etc.

The Standard for Quality the World Over

Globe Boxes are marked by their pleasing lines and proportions and by a rich and lasting finish that is in keeping with the finish of the most luxurious cars. In the list below all Globe Boxes are listed as B or C styles for pleasure cars and T style for trucks and tractors.

The difference between B and C styles is wholly in the corners. In B boxes the corners have radius of one inch; in C style boxes, and also in the T style, the radius is three-eighths of an inch. In all Globe Boxes the covers are of one piece pressed to shape and of unusual depth so that they come well down over the box body and make the boxes watertight against weather and washing. The hack seam of the body is electrically welded, as are the hinges and bottom.

Measurements shown below are inside. The depth measurements are from Cover to Bottom. Covers are always 1 1/4 inches deep. Third and fourth figures denote height.

Prices in every case are for boxes with fine black enamel and with Yale Lift Lock in black nickel finish.

Optional Extras: All Globe Boxes except C-217 and B-229 Combination may be had with wood linings. The linings prevent batteries short circuiting and deaden the noise if objects in the box strike against

one another. The Boxes may also be had with Aluminum Mats. Both of above items are extra and the prices vary with the size of the box.

Style	Length Inches	Width Inches	Height Inches	List Price	No. to Carton	Style	Length Inches	Width Inches	Height Inches	List Price	No. to Carton
C-108	9 5/8	7 5/8	12	\$3.10	6	C-217 1/2	20 1/2	6 1/8	9 3/4	\$4.50	6
B-116	10 3/4	5 5/8	9 1/4	3.00	6	B-219	21	8 3/4	9	4.50	4
C-117	10 3/4	7	9 3/4	3.20	6	B-226	21 1/2	5 7/8	9 1/4	5.00	6
*C-119	11 7-16	8 5/8	10 1/4	3.30	6	*B-229	22	9	10 5/8	5.00	4
B-127	12	6 3/4	9 3/4	3.15	6	*B-241 10	23 15-16	9 13-16	10 3/8	5.50	2
B-121 10	11 1/2	9 15-16	10 3/8	3.40	4	*B-281 10	28 3/4	10 3/8	10 5/8	7.00	2
*B-148	13 1/2	7 15-16	9 3/8	3.25	6	C-271 11	26 15-16	10 1/2	12	6.80	2
C-141 11	13 1/2	10 3/8	9 3/4	4.20	4	T-141 10	14 1/2	10 1/2	13 1/2	6.90	2
B-158	15	7 3/8	8 1/4	3.40	6	*T-191 11	18 3/8	10 1/2	13 1/2	8.25	2
C-166	15 11-16	6 3/8	9 7/8	3.40	6						
*C-168	16	8 1/8	9 7/8	3.50	4						
B-178	16 3/8	7 1/2	10 1/8	3.75	4						
*B-179	16 5/8	9 3/8	10 5/8	4.00	4						
*B-188	17 1/2	7 15-16	10 3/8	3.90	4						
B-181 0	17 13-16	9 11-16	10	4.50	4						
*C-208	19 1/2	8 3/8	9 7/8	4.15	4						

Boxes marked (\*) are regular stock sizes, other sizes shipped from factory.

### BATTERY BOXES

Special height Boxes for starting and lighting batteries. All sizes are 12 in. high.

Style	Inside Dimensions	List Price
C-111 2	11 7-16 x 8 5/8 x 12 in. high	\$4.00
C-141 2	13 1/2 x 10 3/8 x 12 in. high	4.30
C-161 2	16 x 8 7-16 x 12 in. high	4.75
B-181 2	17 13-16 x 9 11-16 x 12 in. high	5.00
B-229 2	22 x 9 x 12 in. high	6.00

### Refrigerator Box



A new style of touring refrigerator is shown. Two end compartments hold six pint bottles each. Food compartment rests on lugs, on the sides of the end compartments. Cover, which may be used as a tray, has lock at each end, box has strong carrying handles and is attached to running board by tee-bolts, so that it may be removed and taken to the lunch place.

Food compartment is porcelain enameled. Bottle, or end, compartments are tinned.

Ref. C. Size, 22x9x13. Each.....\$12.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## Pyramid Aluminum Matting



Pyramid aluminum matting made of the finest aluminum. Durable, non-slipping, easily cleaned and not affected by oil or grease.

Comes in 20 gauge, heavy. Sizes, 9 in., 12 in. and 36 in. wide, any length.

Per square foot ..... \$0.75

## Aluminum Moulding



For attaching aluminum matting to running board. Holds it firmly and serves as finish. Comes in 10 to 14 ft. lengths.

Moulding, per foot ..... \$0.30

## Round Rubber Bumper



Diameter ..... 3½ inches  
 Thickness ..... 1½ inches  
 Price, each ..... \$0.50

## Aluminum Heel Plates



Prevents wearing unsightly holes in your floor covering back of pedals, or covering up holes if already there.

These plates are made of Special extra heavy, tough aluminum, having ¼ inch pyramids with ½ inch plain borders.

Having a beautiful white satin finish, they are ornamental as well as useful. Size 6 x 10½ inches, with screw holes drilled, making it possible to attach in one minute.

Each ..... \$0.75

## Rubber Matting



Made of finest grade rubber laid on heavy fabric back. Will not split or crack. Sold only in original width, but any length will be cut straight across the roll.

36 inches wide.

Pyramid White face ..... sq. yd. \$2.50

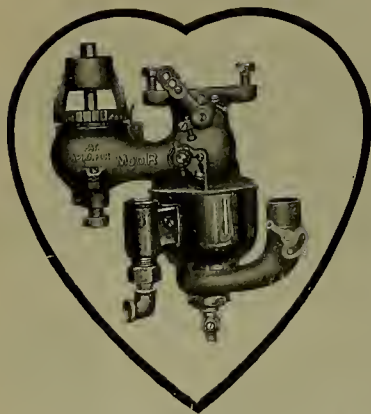
## Arched Auto Bumpers



No. 2.	6-¾x3-¼x1-½ in.	Each.....	\$0.95
No. 3.	8-½x3-½x1-½ in.	Each.....	1.25
No. 4.	8-¾x4-½x1-¾ in.	Each.....	1.35
No. 5.	9 x4-½x2 in.	Each.....	1.80

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## THE SCHEBLER CARBURETOR



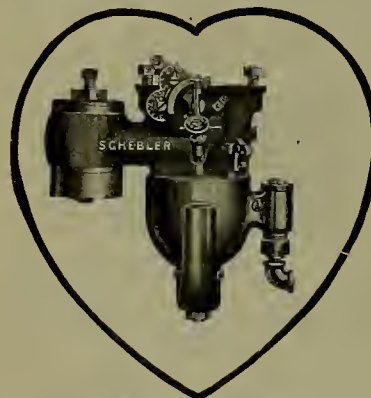
The Model "R" Schebler Carburetor is designed for use on both four and six-cylinder motors. It is a single jet raised needle type of carburetor, automatic in action. The air valve controls the lift of the needle and automatically proportions the amount of gasoline and air at all speeds.

The Model "R" carburetor is designed with an adjustment for low speed; as the speed of the motor increases, the air valve opens, raising the gasoline needle, thus automatically increasing the amount of fuel. The Model "R" Carburetor has but two adjustments,—the low speed needle adjustment, which is made by turning the air valve cap, and an adjustment on the air valve spring for changing its tension.

The Model "R" Carburetor has an eccentric which acts on the needle valve, intended to be operated either from the steering column or from the dash, and insures easy starting, as by raising the needle from the seat an extremely rich mixture is furnished for starting, and for heating up the motor in cold weather. A choker on the air bend is also furnished.

The Dash Board Control or Steering Column Control must be used with instrument; cannot be operated satisfactorily without them.

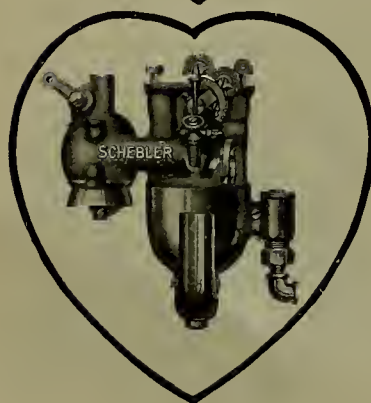
This carburetor is made in four sizes: 1-inch,  $1\frac{1}{4}$ -inch,  $1\frac{1}{2}$ -inch and  $1\frac{3}{4}$ -inch.



THE MODEL "L" carburetor is designed for the exacting needs of high speed motors where low throttling, rapid acceleration, maximum power and speed are required. It is the most improved type of lift needle carburetor and is so designed that the amount of fuel entering the motor is automatically controlled by means of a raised needle working automatically with the throttle. The adjustment or control of gasoline in this instrument can be adjusted for low, intermediate or high speed, each adjustment being independent and not affecting either of the other adjustments.

The Model "L" is furnished with a bend for connecting or taking warm air from around the exhaust manifold into the initial air opening of the carburetor by means of the hot air drum and tubing.

This carburetor is manufactured in the standard iron pipe sizes, viz.: 1-inch,  $1\frac{1}{4}$ -inch,  $1\frac{1}{2}$ -inch, 2-inch and  $2\frac{1}{2}$ -inch; also the  $1\frac{3}{4}$ -inch, which is not a standard iron pipe size.



The Model "L" Carburetor is also manufactured with a dash controlled air valve, this being operated by a lever which is controlled by a lever on the dashboard or steering post of the car. A dashboard adjuster for steering column control will be furnished with the carburetors when desired, and as these are separate articles they should be specified on the order. The dash control feature materially helps starting and warming up the motor in cold weather.

The Model "L" with Dash Control is manufactured in the following sizes, viz.: 1-inch,  $1\frac{1}{4}$ -inch,  $1\frac{1}{2}$ -inch,  $1\frac{3}{4}$ -inch and 2-inch.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## THE SCHEBLER CARBURETOR

THE MODEL "D" is the original Schebler Carburetor, simple of adjustment, and is especially adapted for marine motors, single or opposed motors, stationary engines, and all motors where extreme low throttling conditions are not required. This carburetor is made standard with the shutter air valve in the 1-inch and 1¼-inch sizes. The ¾-inch, 1½-inch and 2-inch sizes are standard with the flusher in the lid. If required other than standard, special instructions should be given on the order.

The air intake and throttle are interchangeable, and connections can be made to either vertical or horizontal manifolds.

This carburetor is manufactured in standard iron pipe sizes, viz.: ½-inch, ¾-inch, 1-inch, 1¼-inch, 1½-inch and 2-inch.

The MODEL "H" Carburetor is manufactured in the ¾-inch, 1-inch and 1¼-inch sizes, and is designed for motorcycles and small high speed motors, where great flexibility and perfect control are required. The supply of gasoline is controlled by the cam, which gives an adjustment on low, intermediate and high speeds. An air bend is so attached to the constant air opening of this carburetor that it can be turned to any convenient angle in order to draw warm air off the cylinders. This air bend will be furnished plain, without shutter, unless specified to the contrary. Also locking device on air valve is furnished to insure easy starting.

In ordering this carburetor or parts, specify make of motorcycle for which they are required, as the different motorcycles require different cams, levers and bends.

### Dash Board and Steering Column Controls, Dash Board Adjuster and Bell Crank



Dash Board Control  
Regular Type



Dash Board Control  
Plunger Type



Bell Crank



Steering Column  
Control

Dash Board Controls for the carburetors should be attached in some convenient place on the dash board of the car. In attaching the Model "L" Dash Control Carburetor in some instances it is necessary to use the Dash Board Adjuster and Bell Crank to take care of the set in the line of throttle controls.

The Dash Board Control is furnished standard with three feet of tubing and wire. The Steering Column Control should be installed upon the steering post. As the steering column control is made with different sized bands for attaching, the circumference of the steering post should be given. The steering column control is furnished standard with five feet of tubing and wire. If additional length of tubing is required, same should be so specified on the order. Additional tubing will be furnished at the rate of 25 cents per foot or fraction thereof.

The above articles are considered to be separate and distinct from the carburetor, and if required should be ordered with the carburetor. In ordering dash or steering column controls, advise whether they are for Model "L" Dash Control or Model "R" carburetors.

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## THE SCHEBLER CARBURETOR



Hot Air Drum and Tubing



Strainer, Type B



Strainer, Type A

The carburetion of the heavy grade of gasoline which is now so prevalent requires a certain amount of heat. The Models "R" and "L" carburetors have a hot air intake for the constant air opening at the bottom of the carburetor. By connecting this hot air intake so as to draw the warm air off the manifold, better results will be obtained. For this purpose a hot air drum has been designed which will adjust itself to almost any style exhaust manifold. Flexible tubing with one inch inside diameter will fit the air intake and connect with the drum. In ordering this connection give exact length of tubing required.

It is absolutely necessary to use a gasoline strainer on account of the large amount of sediment, dirt or water which is in all gasoline, and even straining your gasoline will not remove all this foreign matter. Also condensation occurs in the gasoline tank and there are impurities in the gasoline which collect and will cause flooding and the largest portion of so-called carburetor trouble.

Model	Size	List Price	Model	Size, Inches	List Price
D	½ in.	\$10.50	M	¾ in.	\$12.75
D	¾ in.	12.00	M	1 in.	13.50
D	1 in.	14.25	M	1¼ in.	14.25
D	1¼ in.	14.25	R	1 in.	19.50
D	1½ in.	17.25	R	1¼ in.	21.00
D	2 in.	34.50	R	1½ in.	22.50
F	3 in.	76.50	R	1¾ in.	27.75
H	¾ in.	14.25	Type "A" Strainer Type "B" Strainer		2.75
H	1 in.	14.25			1.50
H	1¼ in.	14.25	Check Valves		2.25
L	1 in.	18.00			3.00
L	1¼ in.	18.75	Check Valves		3.75
L	1½ in.	22.50			4.50
L	1¾ in.	27.75	Check Valves		5.25
L	2 in.	46.50			5.00
L	2½ in.	60.00	Balance Throttles		6.25
L-D-C	1 in.	18.00			7.50
L-D-C	1¼ in.	18.75	Balance Throttles		8.75
L-D-C	1½ in.	22.50			
L-D-C	1¾ in.	27.75			
L-D-C	2 in.	46.50			

Dash Board Controls—Standard with 3 feet tubing and wire ..... \$3.00

Steering Column Controls—Standard with 5 feet tubing and wire ..... 3.00

Bell Crank ..... 1.00

Dash Board Adjuster ..... 1.00

Extra Tubing for Dash Board Controls or Steering Column Controls, per foot or fraction thereof .....

Hot Air Drum for 1 inch tubing .....

Tubing, 1-inch inside diameter, per foot or fraction thereof .....

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# THE SCHEBLER CARBURETOR



We maintain a Service Station under the personal supervision of an expert mechanic thoroughly versed in the principles of carburetion in general and who understands the Schebler Carburetor from start to finish. He is assisted by a corps of first-class mechanics, which enables us to take care of the car with the Schebler Carburetor either in the way of repairs or adjustments. We also install Schebler Carburetor on any make of car. Satisfaction guaranteed.

The Wheeler-Schebler Carburetor Company have, after exhaustive tests, arranged a large number of outfits complete for various cars. These outfits are furnished as complete packages and the leading outfits are given below. Other special outfits can be furnished upon application.

	List Price
ANDERS (3 speed) OUTFIT .....	\$21.00
1-inch R carburetor, manifold and controls.	
MOBILE OUTFIT (1909 to 1913) .....	21.00
1-inch R carburetor, manifold and control.	
WELL OUTFIT, MODEL 25, 1915-16-17 and 18 .....	24.00
1-inch R carburetor, control and warm air drum and 15 inches of tubing.	
ERLAND, MODEL 83 .....	21.00
1-inch R carburetor, with special aluminum housing.	
ERLAND, MODEL 38-69, and other MODEL OVERLANDS upon which the 1-inch carburetor is used .....	24.15
For latest equipment we recommend the 1-inch R cross flange carburetor with control, warm air drum and 18 inches tubing.	
ERLAND, MODEL 40 and other MODEL OVERLANDS upon which the 1¼-inch carburetor is used .....	25.65
For latest equipment we recommend the 1¼-inch R cross flange carburetor with control, warm air drum and 18 inches tubing.	
CK LITTLE SIX .....	22.45
1¼-inch R carburetor, with special drum and 14 inches of 1-inch tubing and 13 inches of 5/8-inch tubing.	
CK BIG SIX .....	22.75
1¼-inch R carburetor with special drum and 20-inch tubing.	
ON, MODEL A 1914, B 1915 "14" 1916 and B-5-R 1917 .....	24.65
1-inch R carburetor with control, drum and 13-inch tubing and special elbow connection.	
EVROLET, MODEL 490, ROYAL MAIL AND BABY GRAND .....	24.75
1-inch R carburetor, with control, drum and 30-inch tubing.	
IAN OUTFIT for TWINS or SINGLES .....	15.00
Special Model H carburetor with manifold.	
DR OUTFIT for 1912 and 1913 TWIN .....	15.00
Special Model H carburetor with manifold.	
L. F. 30 .....	25.05
1-inch R carburetor with control, drum, and three feet tubing.	

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## SCHEBLER CARBURETORS

## Model L

## Price List of Parts

SYMBOL	NAME	1" 1 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	1 $\frac{3}{4}$ "	2"	2 $\frac{1}{2}$ "
	Body Complete.....	\$15.00	\$17.50	\$22.50	\$40.00	\$50.00
	Bowl Complete.....	6.50	6.50	7.50	7.50	12.50
A	Leather Air Valve Disk.....	.50	.50	.60	1.00	1.50
B	Bowl Casting.....	5.00	5.00	6.00	6.00	10.00
C	Body Casting.....	8.00	10.00	15.00	30.00	40.00
D	Spray Nozzle.....	.20	.20	.20	.30	.30
E	Needle Valve.....	.20	.20	.20	.30	.30
F	Cork Float.....	.50	.50	.50	.50	1.00
G	Gasoline Union.....	.50	.50	.70	.70	.70
H	Float Valve.....	.20	.20	.20	.20	.40
I	Needle Valve Adjusting Knurl.....	.20	.20	.20	.30	.30
J	Float Lever.....	.20	.20	.20	.20	.20
K	Throttle Disk.....	.20	.20	.30	.30	.50
L	Air Valve Cap.....	1.50	1.50	1.50	2.00	3.00
M	Air Valve Adjusting Screw.....	.20	.20	.20	.40	.40
N	Cork Gasket for Bowl.....	.10	.10	.10	.10	.10
O	Air Valve Spring.....	.10	.10	.10	.10	.20
P	Needle Valve Lift Lever.....	.40	.40	.40	.40	.50
Q	Throttle Lever.....	.40	.40	.40	.40	.40
R	Flange.....	1.00	2.00	.....	4.00	5.00
S	Throttle Stop Screw.....	.10	.10	.10	.10	.10
U	Bowl Cap.....	.30	.30	.30	.30	.30
V	Flusher.....	.50	.50	.50	.50	.50
W	Needle Valve Lift Lever Pin.....	.10	.10	.10	.10	.10
X	Needle Valve Guide.....	.30	.30	.30	.30	.30
Y	Needle Valve Lift Lever Spring.....	.10	.10	.10	.10	.10
Z	Cam Complete.....	1.00	1.00	1.00	1.00	1.00
1	Throttle Stop Lock Screw.....	.10	.10	.10	.10	.10
2	Air Bend.....	2.00	2.00	2.00	2.00	3.00
3	Air Valve Seat.....	2.00	2.00	2.00	3.00	3.00
4	Float Washer and Screw.....	.20	.20	.20	.20	.20
5	Flange Cap Screw.....	.10	.10	.10	.20	.20
6	Float Valve Retainer Nut.....	.10	.10	.10	.10	.10
7	Float Lever Screw.....	.10	.10	.10	.10	.10
8	Throttle Shaft.....	.30	.30	.50	.50	.60
9	Bowl Lock Nut Casting for Air Bend.....	.50	.50	1.00	1.00	1.50
10	Air Bend Lock Nut.....	.10	.10	.10	.10	.10
11	Throttle Lever Lock Screw.....	.10	.10	.10	.10	.10
12	Water Jacket Plug.....	.10	.10	.10	.10	.10

## Model D

SYMBOL	NAME	1 $\frac{1}{2}$ " 3 $\frac{1}{4}$ " 1 $\frac{3}{4}$ " 1 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	2"
	Air Valve Complete.....	\$4.00	\$ 5.00	\$ 8.00
	Bowl Complete.....	9.00	12.00	22.00
	Throttle Complete.....	4.00	6.00	9.00
A	Leather Air Valve Disk.....	.30	.40	.60
B	Bowl Casting.....	6.00	9.00	17.00
C	Butterfly Shutter Complete.....	.....	.50	.50
D	Spray Nozzle.....	.20	.20	.20
E	Needle Valve.....	.20	.30	.40
F	Cork Float.....	.50	.70	2.00
G	Gasoline Union.....	.50	.50	.70
H	Float Valve.....	.20	.20	.20
I	Float Lever.....	.20	.20	.20
	Note—Cast Lever used in 1 $\frac{1}{2}$ ", 3 $\frac{1}{4}$ ", 1 $\frac{1}{2}$ ", and 2" sizes— 1 $\frac{1}{2}$ " and 3 $\frac{1}{4}$ " Levers are the same; 1 $\frac{1}{2}$ " and 2" Levers are both different in size.			
J	Float Lever.....	.20	.....	.....
	Note—Punched Lever used in the 1" and 1 $\frac{1}{4}$ " size.			
K	Throttle Disk.....	.10	.20	.20
L	Lid.....	2.00	3.00	4.00
M	Air Valve Adjusting Screw.....	.20	.30	.60
N	Cork Gasket for Lid.....	.10	.10	.10
O	Air Valve Spring.....	.10	.10	.20
P	Throttle Back.....	1.50	2.00	3.00
Q	Throttle Lever.....	.40	.40	.50
R	Throttle Front with Pipe Thread.....	2.00	3.50	5.50
S	Throttle Stop Screw.....	.10	.10	.10
T	Drain Cock.....	.50	.50	.50
U	Bowl Cap.....	.30	.30	.30
V	Flusher.....	.50	.50	.50
W	Lock Nut for Adjusting Screw.....	.10	.10	.....
X	Needle Valve Connection.....	.20	.20	.20
Y	Lock Spring for Adjusting Screw.....	.10	.10	.....

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## SCHEBLER CARBURETORS

## Model D—Cont.

## Price List of Parts

SYMBOL	NAME	$\frac{1}{2}$ " $\frac{3}{4}$ " 1" 1 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	2"
1	Throttle Stop Lock Screw.....	\$0.10	\$0.10	\$0.10
2	Air Valve Cap Screw.....	.10	.10	.20
3	Air Valve Casting.....	3.00	4.00	7.00
4	Float Washer and Screw.....	.20	.20	.20
5	Throttle Cap Screw.....	.10	.10	.20
6	Float Valve Retainer Nut.....	.10	.10	.10
7	Float Lever Screw.....	.10	.10	.10
8	Float Lever Screw Bearing.....	.10	.10	.10
9	Air Valve Adjusting Screw Lock Nut for 2-inch D.....			.10
10	Cork Gasket for Bowl Cap.....	.10	.10	.10

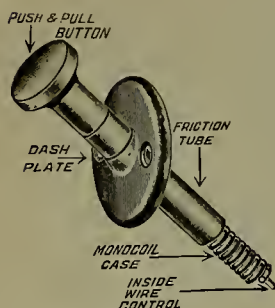
## Model R

SYMBOL	NAME	1" & 1 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	1 $\frac{3}{4}$ "
	Body Complete.....	\$16.00	\$17.00	\$22.00
	Bowl Complete.....	7.50	7.50	7.50
A	Air Valve Complete (Parts A and 3).....	3.50	4.50	5.00
B	Compensating Air Valve Complete.....	1.50	2.00	2.00
C	Bowl Casting.....	5.00	5.00	5.00
D	Carburetor Body Casting.....	7.00	8.00	13.00
E	Spray Nozzle.....	.20	.20	.20
F	Needle Valve.....	.20	.20	.20
G	Cork Float.....	.50	.50	.50
H	Gasoline Union.....	.50	.50	.70
I	Float Valve.....	.20	.20	.20
J	Venturi Tube.....	.60	.60	.60
	Float Lever.....	.20	.20	.20
	Note—New style Lever is a punched Lever—old style Lever is a cast Lever.			
K	Throttle Disc.....	.20	.20	.30
M	Air Valve Adjusting Screw.....	.30	.30	.30
N	Bowl Gasket.....	.10	.10	.10
O	Air Valve Spring.....	.10	.10	.10
P	Needle Valve Lift Lever.....	1.00	1.00	1.00
Q	Throttle Lever.....	.40	.40	.40
R	Throttle Shaft Adjusting Stop.....	.40	.40	.40
S	Dash Control Shaft Bearing.....	.20	.20	.20
T	Drain Cock.....	.50	.50	.50
U	Bowl Cap.....	.30	.30	.30
W	Dash Control Blank Plug.....	.20	.20	.20
	Dash Control Shaft.....	.30	.30	.30
	Note—New style Shaft is threaded on each end—old style Shaft is threaded on one end only.			
X	Dash Control Lever.....	.20	.20	.20
Y	Binding Post Complete.....	.20	.20	.20
1	Venturi Tube Lock Screw.....	.10	.10	.10
2	Air Bend.....	2.00	2.00	2.00
3	Dash Pot Air Valve Seat.....	2.00	2.50	3.00
4	Float Washer and Screw.....	.20	.20	.20
5	Flange Cap Screw.....	.10	.10	.10
6	Float Valve Retainer Nut.....	.10	.10	.10
7	Float Lever Screw.....	.10	.10	.10
8	Throttle Shaft with Lock Nut and Disk Screws.....	.30	.30	.50
9	Bowl Lock Nut.....	.30	.30	.30
10	Throttle Shaft Collar.....	.10	.10	.10
11	Throttle Shaft Gasket.....	.10	.10	.10
12	Dash Control Tube Lock Screw, Old Style.....	.10	.10	.10
13	Float Lever Screw Bearing.....	.10	.10	.10
14	Throttle Lever Lock Screw.....	.10	.10	.10
15	Air Valve Friction Lever and Spring.....	.20	.20	.20
16	Air Valve Friction Lever Pin.....	.10	.10	.10
17	Dash Control Shaft Gasket.....	.10	.10	.10
18	Air Bend Lever, Shaft, and Spring.....	.50	.50	.50
19	Air Bend Disc.....	.10	.10	.10
20	Throttle Disc Screw.....	.10	.10	.10
21	Throttle Shaft Lever Lock Nut.....	.10	.10	.10
22	Lock Screw for Throttle Stop Adjusting Screw.....	.10	.10	.10
23	Throttle Stop Adjusting Screw.....	.10	.10	.10
24	Cork Gasket for Bowl.....	.10	.10	.10
25	Air Valve Choke Lever.....	.10	.10	.10
26	Dash Control Shaft Lock Nut.....	.10	.10	.10
27	Dash Control Tube Lock Screw, New Style.....	.10	.10	.10

NOTE—When ordering parts, always state size and model carburetor for which they are wanted and name of motor upon which the carburetor is used.

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## Dash and Steering Post Controls



DASH CONTROL No. DC4

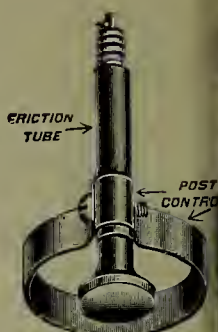
Used chiefly for carburetor hot air controls, but can be used for any control on autos, tractors, trucks, motor boats, etc.

The button pulled or pushed operates an adjusting wire attached to the adjusted article at the other end through the mono coil or single wire coiled case. Standard finish. Polished nickel plate and button, and black Japan coil.

Length of coil 36-in. 48-in. 60-in.

No. DC4 .....\$1.60 \$1.75 \$1.90

No. PC2 ..... 2.50 2.70 2.85



STEERING POST CONTROL No. PC2

## Flexible Metal Hose



A high grade flexible metal tubing to be used for conveying hot air from exhaust pipe to carburetor. Can be used for connection to exhaust horn, also very serviceable for enclosing and protecting electric light and ignition wires or cables.

Per Foot

$\frac{1}{2}$ in. I. D. ....	\$0.15
$\frac{5}{8}$ in. I. D. ....	.20
1 in. I. D. ....	.30
$1\frac{1}{4}$ in. I. D. ....	.40
$1\frac{1}{2}$ in. I. D. ....	.50

## Vellumoid Gasket



Made of Vellumoid Paper and treated with a special solution to prevent wearing or rotting. Intended for carburetor and manifold connections.

Made for 1 in.,  $1\frac{1}{4}$  in. and  $1\frac{1}{2}$  in.

Each .....\$ .00



## Stewart Vacuum Gasoline System

Comprises a small round tank, mounted on engine side of dash. This tank divided into two chambers, upper and lower. The upper chamber is connected to intake manifold, while another pipe connects it with the main gasoline supply tank. The lower chamber is connected with the carburetor.

The intake strokes of the motor create a vacuum in the upper chamber of the tank, and this vacuum draws gasoline from the supply tank.

As the gasoline flows into the upper chamber it raises a float valve. When the float valve reaches a certain height it automatically shuts off the vacuum valve, and opens an atmospheric valve, which lets the gasoline flow down into the lower chamber. The float valve in the upper chamber drops with the gasoline flowing out, when it reaches a certain point it in turn reopens the vacuum valve, and the process of refilling the upper chamber begins again. The same processes are repeated continuously, and absolutely automatically. The lower chamber is always open to atmosphere, so that the gasoline flows to the carburetor, as required, uninterruptedly and with an even pressure.

Does away with all need of pressure—eliminates power pressure pumps, pressure pumps, air gauge on dash, extra line of piping to rear tank, gasoline fill and all labor of installing all this equipment—does not require airtight supply tank nor airtight filler caps. Furnished in 2 sizes.

Price, each, medium or large size .....\$1.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## BRASS SOLDERLESS CONNECTIONS



For  $\frac{1}{4}$ -in. and  $\frac{1}{2}$ -in. Outside Diameter Copper or Brass T tubing.

These unions require no solder. They make up tight by simply flaring out the end of the tubing, which is done by using a tool with the proper taper.

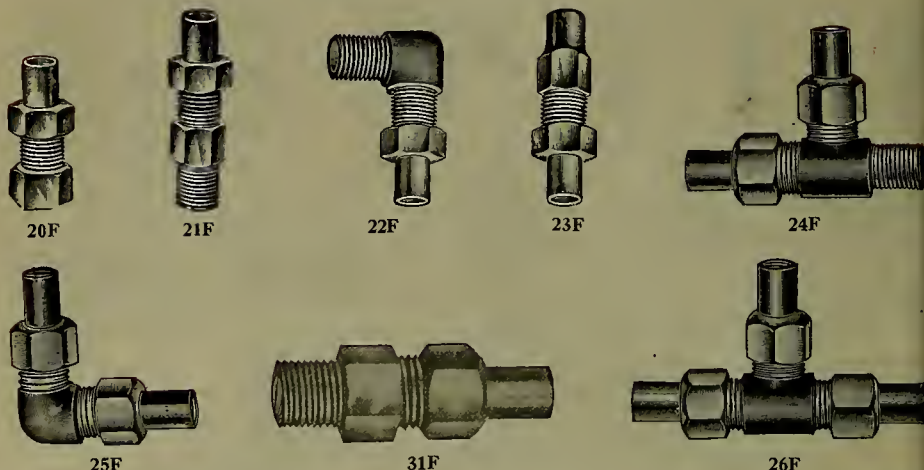
No. 1F fitting is always the one through which the tubing is inserted, and then the end of tubing is flared out and seated. The No. 1F fitting is always the one used to join the tubing to the other fittings.

When the unions No. 1F are tightly screwed to the pieces, 2F, 3F, etc., the flared end of the tubing is held so tightly in place that there is no liability of the tubing becoming disengaged, and an absolutely tight joint is thereby effected. For use on gas, gasoline or oil pipes.

	For $\frac{1}{4}$ -inch		Each		For 5-16-inch		Each	
Male Connector	No. 1F			\$0.15	No. 10F			\$0.20
Female Connector	No. 2F			.18	No. 11F			.25
Check Valve	No. 3F			.25	No. 12F			.45
	No. 4F			.24	No. 13F			.30
Union	No. 5F			.20	No. 14F			.25
Union to $\frac{1}{4}$ -in. I. P.	No. 6F			.18	No. 15F			.25
Union to $\frac{1}{2}$ -in. I. P.	No. 7F			.20	No. 16F			.30
Union to $\frac{3}{4}$ -in. I. P.	No. 8F			.18	No. 17F			.25
Female Connector	No. 9F			.20	No. 18F			.25
Union	No. 27F			.24	No. 19F			.25
	No. 28F			.24	No. 20F			.30
					No. 30F			.30
	For 3-16-inch		Each		For 5-16-inch		Each	
Article	No. 60F			\$0.05	No. 60F			\$0.05
Union	No. 61F			.05	No. 61F			.10
Union	No. 62F			.20	No. 62F			.24
Check Valve	No. 63F			.24	No. 63F			.28
Union	No. 64F			.25	No. 64F			.35
Union	No. 65F			.20	No. 65F			.30
Union	No. 66F			.15	No. 66F			.25
Connector	No. 68F			.15	No. 68F			.20
Union	No. 69F			.18	No. 69F			.28
Union	No. 70F			.18	No. 70F			.28
Union	No. 71F			.24	No. 71F			.35
Check	No. 72F			.24	No. 72F			.35
Check	No. 73F			.24	No. 73F			.40

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## BRASS SOLDER OR BRAZING CONNECTIONS

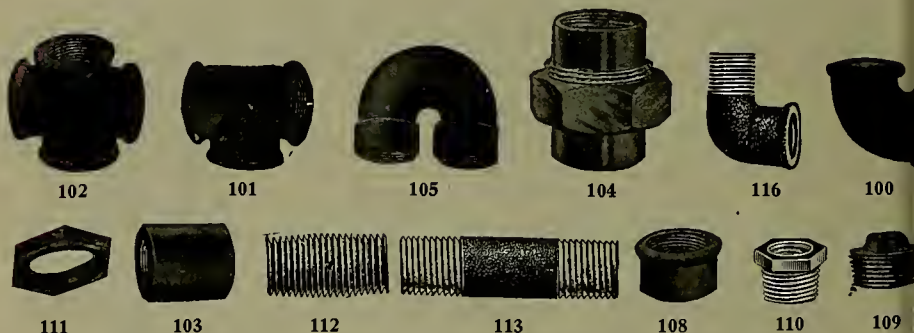


For Brass or Copper Tubing.

These fittings are carefully machined of the best quality of brass and when soldered or brazed to  $\frac{1}{4}$ -inch outside diameter tubing form an absolutely tight joint that will not break or jar loose.

No.	Article	Thread	$\frac{1}{4}$ -in.	$\frac{1}{2}$ -in.
20F	Female Connector, $\frac{1}{4}$ -in. I. P.		\$.20	\$.25
21F	Male Connector, $\frac{1}{4}$ -in. I. P.		.20	.25
22F	Elbow, $\frac{1}{4}$ -in. I. P.		.25	.30
23F	Coupling		.20	.25
24F	Tee, $\frac{1}{4}$ -in. I. P.		.30	.35
(2 Tubing Ends & I. P. thread end)				
25F	Elbow, 2 Tubing Ends		.28	.33
26F	Tee, 3 Tubing Ends		.35	.40
31F	Check Valve, $\frac{1}{4}$ -in. I. P.		.40	.50

## BRASS FITTINGS—ROUGH—IRON PIPE THREAD



No.	Article	Size	Ins.	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	No.	Article	Size	Ins.	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$
No. 100.	Elbows	Each	.24	.34	.42	.56		No. 111.	Lock Nuts	Each	.20	.24		
No. 101.	Elbows, Street	Each	.50	.60	.70	.80		No. 103.	Reducers	Each	.20	.30		
No. 102.	Tees	Each	.30	.40	.60	.80		No. 103.	Couplings	Each	.20	.28	.32	
No. 102.	Crosses	Each	.40	.60	.80	1.00		No. 112.	Nipples, Close	Each	.20	.25	.30	
No. 110.	Bushings	Each	.20	.24	.28			No. 113.	Nipples, Short	Each	.20	.25	.30	
No. 109.	Plugs	Each	.18	.20	.24	.30		No. 113.	Nipples, Long	Each	.25	.30	.35	
No. 108.	Plugs	Each	.30	.30	.40	.50		No. 104.	Unions	Each	.40	.45	.65	
No. 105.	Return Bends	Each			1.00	1.25								

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## COCKS AND PRIMING CUPS

Female Priming Cup  
Nos. 448-449

Forked Handle Priming Insulated Cup Nos. 425-426



Insulating Cup Nos. 483-484



Angle Shank Priming Cup Nos. 463-466

No.	Size	Price each	Price per doz.
448	1/8 inch I. P. thread.....	\$0.75	\$8.50
449	1/4 inch I. P. thread.....	1.00	11.50

No.	Size	Price each	Price per doz.
425	1/8 inch I. P. thread.....	\$1.00	\$11.50
426	1/4 inch I. P. thread.....	1.50	16.50

No.	Size	Price each	Price per doz.
483	1/8 inch I. P. thread.....	\$0.85	\$10.00
484	1/4 inch I. P. thread.....	1.25	14.50

No.	Size	Price each	Price per doz.
465	1/8 inch I. P. thread.....	\$0.85	\$10.00
466	1/4 inch I. P. thread.....	1.35	15.50

No.	Size	Price each	Price per doz.
405	1/8 inch I. P. thread.....	\$0.75	\$8.50
406	1/4 inch I. P. thread.....	1.00	11.50

No.	Size	Price each	Price per doz.
475	1/8 inch I. P. thread.....	\$0.85	\$10.00
476	1/4 inch I. P. thread.....	1.40	16.20

No.	Size	Price each	Price per doz.
6	1/8 inch I. P. thread.....	\$0.50	\$5.75
7	1/4 inch I. P. thread.....	.60	7.00

No.	Size	Price each	Price per doz.
12	1/8 inch I. P. thread.....	\$0.65	\$7.20
13	1/4 inch I. P. thread.....	.80	9.10

No.	Size	Price each	Price per doz.
37	3/8 inch I. P. thread.....	\$0.75	\$8.50
38	1/2 inch I. P. thread.....	1.00	11.50

No.	Size	Price each	Price per doz.
43	1/8 inch I. P. thread.....	\$0.85	\$10.00
44	1/4 inch I. P. thread.....	1.35	15.50

No.	Size	Price each	Price per doz.
40	1/8 inch I. P. thread.....	\$0.80	\$9.10
41	1/4 inch I. P. thread.....	.90	10.20

No.	Size	Price each	Price per doz.
46	1/8 inch I. P. thread.....	.90	10.20
47	1/4 inch I. P. thread.....	1.00	11.50

No.	Size	Price each	Price per doz.
18	1/8 inch I. P. thread.....	\$0.75	\$8.50
19	1/4 inch I. P. thread.....	.90	10.20

No.	Size	Price each	Price per doz.
22	1/8 inch I. P. thread.....	.80	9.10
23	1/4 inch I. P. thread.....	.90	10.20

Model	Size	Price each	Price per doz.
27-EF	single union for 1/4 inch	1.10	\$12.75
28-EF	double union for 1/4 inch	1.25	14.50
29-EF	single union for 5/16 inch	1.10	12.75
30-EF	double union for 5/16 inch	1.25	14.50
57-EF	single union for 3/8 inch	1.10	12.75
58-EF	double union for 3/8 inch	1.25	14.50

Model	Size	Price each	Price per doz.
27-E	single union for 1/4 inch	1.10	\$12.75
28-E	double union for 1/4 inch	1.25	14.50
29-E	single union for 5/16 inch	1.10	12.75
30-E	double union for 5/16 inch	1.25	14.50



Long Shank Priming Cup Nos. 475-476

Male Air Cock  
Nos. 18-19Female Air Cocks  
Nos. 37-38Solder Type Shut-off  
Cock Nos. E27, Double

Short Shank Priming Cup Nos. 405-406

Pet Cocks  
Nos. 6-7

Male and Female Air Cocks Nos. 40-41

Solderless Type Shut-off  
Cock No. EF-27, Double

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## Compression Coupling Outfit

An assortment of compression couplings which contains 112 couplings in a substantial wooden box. The sizes and types contained in the assortment are all salable and will take care of almost any requirements along this line.

The assortment is made up of the following types and sizes:

12 No. 60FX 1/4 in. Sleeves	12 No. 60FX 5-16 in. Sleeves
6 No. 62FX 1/4 in. Unions	6 No. 62FX 5-16 in. Unions
6 No. 64FX 1/4 in. Tees	6 No. 64FX 5-16 in. Tees
3 No. 65FX 1/4 in. Elbows	3 No. 65FX 5-16 in. Elbows
6 No. 66FX 1/4 in. Bushings	6 No. 66FX 5-16 in. Bushings
6 No. 68FX 1/4 in. Connectors	6 No. 68FX 5-16 in. Connectors
6 No. 69FX 1/4 in. Elbows	6 No. 69FX 5-16 in. Elbows
6 No. 70FX 1/4 in. Elbows	6 No. 70FX 5-16 in. Elbows
3 No. 72FX 1/4 in. Tees	6 No. 72FX 5-16 in. Tees

Outfit complete .....\$15.00

## Oildag and Gredag

### GREDAK

For transmissions, differential and other gears, cups, wheel hubs, universal joints, pumps, steering worms, chains, etc.

Especially prepared for automobile, motor boat and motorcycle lubrication.

Gredag is better than other graphite greases, because of the absolute purity and the soft, unctuous nature of Acheson Graphite.

Gredag is better than any plain grease because the graphite establishes a durable anti-friction surface over the parts lubricated, greatly assisting lubrication and hence preventing wear. Moreover, the solid graphite does not squeeze out from between the rubbing surfaces under heavy pressures as grease would do. This is of vital importance to the long life of gear teeth and of shaft bearings, such as those in the gear cases.



### OILDAG

Oildag is a lubricant of unequalled merit for automobiles, motor boats, motorcycles and all gas engines. Its value is found in the fact that it

**Decreases Gasoline Consumption.** (By increasing the compression in the cylinders a higher explosive force is developed, consequently less "gas" is needed for a given power generated.)

**Increases Power.** (By increasing compression and permitting more perfect valve seating.)

**Lessens Carbon.** (Most carbon comes from the oil decomposed. Oildag cuts in half the amount of oil entering the combustion chamber.)

**Gives Increased Mileage per Gallon Fuel.** (Because of freer-acting piston rings affording better compression, which economizes fuel.)

**Lessens Oil Consumption.** (By increasing the lubricating efficiency and by keeping excess oil out of the combustion chambers.)

**Lengthens the Life of the Motor.** (By forming the "Graphoid" (anti-friction) surface.)

**Affords Perfect Lubrication.** (By combining with the metal of rubbing surfaces to form a "Graphoid" (anti-friction) surface.)

Oildag is used and recommended by a large number of automobile and engine manufacturers. Oildag is put up in concentrated form in cans. You mix it with the oil you use regularly. It mixes and blends readily with the oil and will flow wherever oil will go. This radical advantage of Oildag over all other forms of graphite renders it unequalled in its efficiency as a motor lubricant.

### PACKAGES AND PRICES

No. 1 can contains charge for one gallon oil; one dozen in a box; sold only by the box.....	\$4.80
No. 5 can, containing charge for 5 gallons oil.....	1.75
No. 10 can, containing charge for 10 gallons oil.....	2.50
No. 50 can, containing charge for 50 gallons oil.....	17.50

Another point of superiority is that Gredag withstands a very wide range in temperature changes. A high temperature or a low temperature, will hardly alter its consistency, and thus it does not change to any great extent between the freezing point and 170 degrees Fahrenheit. In the average working temperature there is no change; a fact that makes Gredag of unusual value compared with plain, ordinary greases for use in all seasons. Furthermore, Gredag easily gives at least double the service of plain grease.

The grades recommended for automobile use are:

- No. 31. (Semi-fluid) For gears enclosed in oil tight cases and running quietly.
- No. 32. (Soft) For general use—ideal for wheel hubs, shackle bolts and grease cups.
- No. 33. (Medium) For cup and general use—particularly popular for universal joints and steering gears.
- No. 63. (Medium) A fibre grease for general use—excellent for open gears.
- No. 41. A medium light lubricant designed especially for transmission and rear axles. Lasts longer. Stays in the gear cases. Will not channel. Eliminates noise and reduces wear to minimum. Especially popular for Worm Drives.

### PACKAGES AND PRICES

Grades 41, 31, 32, 33 and 63.

Size of Package	
1-lb. can .....	\$0.50 per lb.
5-lb. can .....	.40 per lb.
10-lb. can .....	.35 per lb.
25-lb. can .....	.32 per lb.
50-lb. can .....	.30 per lb.
100-lb. keg .....	.28 per lb.
200-lb. bbl. ....	.27 per lb.
400-lb. bbl. ....	.26 per lb.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# Dixon's Graphite Automobile and Tractor Lubricants

## GRAPHITE TRANSMISSION AND DIFFERENTIAL GREASE

No. 677



A graphited grease of just the right consistency for all enclosed transmission and differential gears, except those intended to be lubricated with light oil. It is the grease the "Speed Kings" use. There is nothing like it on the market. We stand behind this grease with our strongest recommendation.

1 lb. Tin Cans (36 in case)	.....40 cts. per lb.
5 lb. Tin Pails (10 in case)	.....35 cts. per lb.
0 lb. Tin Pails (6 in case)	.....35 cts. per lb.

## GRAPHITE GEAR OIL

No. 675



A fluid gear lubricant for worm drives and for transmission and differential cases designed for light oil lubrication. It readily follows the gears and furnishes ample graphite lubrication to the bearings.

1 lb. Tin Pails (10 in case)	.....40 cts. per lb.
1 lb. Tin Pails (6 in case)	.....37 cts. per lb.

## GRAPHITE NON-LEAK GREASE

No. 680



No. 680 solves the problem of grease exuding from the rear axle to the brake bands and wheels. Excess grease not only detracts from the appearance, but also produces an element of danger. Try it if your rear axle leaks. This special grease should be used only when No. 677 or No. 675 will not stay in the differential; it is not intended for transmissions.

1/2 lb. Tin Cans (20 in case)	.....40 cts. per lb.
1 lb. Tin Pails (20 in case)	.....40 cts. per lb.
1 lb. Tin Pails (6 in case)	.....40 cts. per lb.



## GRAPHITOLEO

ack wheel spindles and steering gear housings with whitoleo. Absolutely warranted not to gum or become rancid. The collapsible tubes are very convenient automobile use.

2. Tubes (36 in case)	.....\$5.00 per dozen
1 lb. Tin Cans (36 in case)	..... .55 per lb.
1 lb. Tin Pails (10 in case)	..... .50 per lb.

## GRAPHITE CUP GREASES

Cup greases containing fine flake graphite reduce friction to a minimum. Use Dixon's No. 3 except in hot climates where No. 5 is better. For all grease cups, axles, etc. Bearings soon acquire the well-known graphite polish that eliminates friction and causes easy running. Specify density desired when ordering.



1 lb. Tin Cans (36 in case)	.....40 cts. per lb.
5 lb. Tin Pails (10 in case)	.....35 cts. per lb.
10 lb. Tin Pails (6 in case)	.....35 cts. per lb.

## GRAPHITE HEAT-RESISTING GREASE

No. 676

No. 676 is the best grease we know of for universal joints, water pump cups, overhead valve cups and clutch thrust collars. It positively will not melt and run out. This grease should not be used on gears.



1 lb. Tin Cans (36 in case)	.....50 cts. per lb.
5 lb. Tin Pails (10 in case)	.....45 cts. per lb.

## MOTOR GRAPHITE

The purest and most carefully selected grade of flake graphite, ground extremely fine. Its function is to eliminate friction and wear of parts and to increase power. Use it in cylinders, on chains, springs, tires, wheel rims, bearings, and wherever friction occurs.



1/2 lb. Tin Cans (36 in case)	.....50 cts. per can
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## GRAPHITE JOINT COMPOUND

Smear this preparation on gaskets and on the threads of spark plugs, caps on radiators and gasoline tanks, bolts, nuts, etc., and they can always be removed easily. Prevents rust and sticking.

4 oz. Collapsible Tubes

Price, per dozen .....\$2.65



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.





**NON-FLUID OIL** best protects your motor car investment, by preventing wear and loss of power more effectively than other lubricants. Insures most efficient, economical and longest service from cars by overcoming the faults of ordinary greases and oil.

**USED AND RECOMMENDED BY MOST MOTOR CAR MANUFACTURERS SINCE FIRST DAYS OF MOTORING.**

**NON-FLUID OIL** is not the name of a general class of lubricants, but is a specific product manufactured by New York & New Jersey Lubricant Co. It is identified by sprocket wheel trade-mark above shown.

**"K-No. 000" NON-FLUID OIL** is of proper consistency for use in Compression Cups on all bearings, for packing Differential Gears, Planetary Transmissions, for Steering Gear Knuckles, Ball and Roller Bearings, Axles and Universal Joints. Lasts longer than any grease.

**"K-No. 00-Special" NON-FLUID OIL** is softer than the "K-No. 000" grade. Designed particularly for lubricating Sliding Gear Transmissions. It cushions the gear teeth, prevents shocks when changing speeds, prevents abrasion and heating, and assures smooth, quiet running. Reaches and lubricates all shaft bearings.

**"K-Forty" NON-FLUID OIL** for lubricating Timing Gears. Quiets gears. Won't dry up nor gum. Is not so heavy that the gears plow channels in it, and thereafter get no lubrication; nor so light that it will stew out of gear case.

**"A-No. 5" PUMP LUBRICANT.** For use in Grease Cups on Circulating Pumps. Is a "water-proof" lubricant. Will not "thin out" and waste. Much cleaner, less expensive than tallow grease.

**"K-No. 4" NON-FLUID OIL** (Melting Point 488 deg. Fah.). Proves of great value for use under condition where greases melt and waste, especially on bearings or gears located in hot places. This product will "stay by" universal joints on shaft-driven cars when nothing else will.

"K-#00/Special," "K-#000,"

"K-Forty" and "A-#5" grades.

3-lb. cans .....	\$0.75
5-lb. cans .....	1.25
10-lb. cans .....	2.50
20-lb. cans .....	4.00
50-lb. cans .....	10.00

"K-#1" grade.

3-lb. cans .....	\$0.90
5-lb. cans .....	1.50
10-lb. cans .....	3.00
20-lb. cans .....	5.00
50-lb. cans .....	12.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## Danger Pennies

## How false economy in lubrication often proves a boomerang

Let us look at some plain arithmetic. Suppose your car cost \$1200. At the end of the year you reckon expenses, and roughly you find:

Depreciation in selling value, say . . . \$400.

Tires, approximately	100.
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Repairs . . . . . ?

Gasoline—5000 miles (a) 2c. a mile or less 100.

Insurance, say . . . . . 65.

Lubrication—perhaps as much as . . . 15.

\$680, plus

Lubrication comes last—at a trivial \$15. a year. It is a human failing to treat such small outlays lightly. Some motorists do not yet realize that oils which can be sold at pared-down prices cause pared-down efficiency and send total yearly expenses up—not by mere penny steps, but by real dollar leaps.

Consider *depreciation*—why does it loom up so large. *Not enough attention to that \$15. a year.* When all cars are given efficient oil for their motors, automobiles will command higher resale prices.

*Trace back most repair bills and again you find not enough attention to that \$15. a year.*



# Mobil oils

*A grade for each type of motor*

*Gasoline consumption mounts up.* Experienced motorists know that efficient lubrication insures a higher mileage from gasoline. This is certain. Cheap, poor wearing oils make noisy, quick wearing motors, and wern motors soon wear out.

If you decide in favor of true economy in lubrication you will find your guide in the Gargoyle Mobiloils Chart of Recommendations.

The lubricating chart on the right will indicate the correct grade of Gargoyle Mobiloil for the cars listed.

A booklet on lubrication containing our complete chart which embraces all American makes of cars and the leading foreign makes, will be mailed on request.

## Correct Automobile Lubrication

**Explanation:** In the Chart below, the letter opposite the cat indicates the grade of Gargoyle Mobiloils that should be used: For example A means Gargoyle Mobiloil, "A," Arc means Gargoyle Mobiloil Arctic, etc.

[illegible]

# Description of Gargoyle Mobiloils

## Gargoyle Mobiloil "A"



### Medium Body

A dark amber-colored oil for lubrication of water-cooled gasoline engines requiring a rich lubricant. Also for the motor and enclosed chains of electric vehicles, for motorcycles where a medium-bodied oil is required and for marine motors. It holds its body under extreme heat.

## Gargoyle Mobiloil "B"

### Heavy Body

For both air and water-cooled gasoline engines where a heavy-bodied oil is required. It holds up compression under extreme heat. This oil is especially suitable for lubrication of motorcycle and tractor engines.

## Gargoyle Mobiloil "E"

### Light Body

A straw-colored oil for lubrication of vertical gasoline engines where an oil of light body is required. It flows freely in cold weather. Particularly suited to Fords.

## Gargoyle Mobiloil Arctic

### Light Medium Body

A light-colored oil of intermediate body for both summer and winter lubrication of gasoline engines. It flows freely in cold weather.

### PRICES

#### Gargoyle Mobiloil "A" "B" "E" and Arctic

One-gallon can	.....\$ 1.35 per can
Ten one-gallon cans in case	..... 13.50 per case
Five-gallon can in case	..... 5.75 "
Two five-gallon cans in case	..... 11.25 "
Fifteen-gallon steel drum with faucet	..... 1.00 per gal.
Plus \$1.25 for drum.	
Thirty-gallon steel drum with faucet	..... .95 "
Plus \$1.50 for drum.	
Fifty-five-gallon steel drum with faucet	..... .90 "
Plus \$2.25 for drum.	
Half Barrels (wood)	..... .95 "
Barrels (wood)	..... .90 "

**GARGOYLE**  
  
**Mobil oils**  
*A grade for each type of motor*

## Gargoyle Mobiloil "C"

A heavy, dark fluid oil for transmission and differential lubrication, especially for ball or roller-bearing types, as well as for timing gears and worm gears. It will follow, coat, cushion and thoroughly lubricate the gears, allowing them to engage easily and operate without noise.

### PRICES

One-gallon can	.....\$ 1.15 per can
Ten one-gallon cans in case	..... 11.50 per case
Five-gallon can in case	..... 4.75 "
Two five-gallon cans in case	..... 9.25 "
Half Barrels (wood)	..... .75 per gal.
Barrels (wood)	..... .70 "

## Gargoyle Mobiloil "CC"

A heavy semi-solid lubricant of dark amber color. It will follow, coat, cushion and thoroughly lubricate the gears, allowing them to engage easily and operate without noise. Its use is recommended where, with a fluid oil, leakage would occur from the transmission case or rear axle housing.



### PRICES

One 5-lb. tin	.....\$ 1.10 per can
Ten 5-lb. tins in case	..... 11.00 per case
One 10-lb. tin	..... 2.10 per can
Six 10-lb. tins in case	..... 12.50 per case
One 25-lb. tin in case	..... 5.25 "
Two 25-lb. tins in case	..... 10.25 "
Half Barrels (wood)	..... .14 per lb.
Barrels (wood)	..... .13 "

## Mobilubricant

### A High Grade Grease



Mobilubricant is one of the best-known automobile greases on the market.

It is a smooth, light-colored medium-bodied grease, carefully strained in manufacturing, and free from all particles of insol-

uble and non-lubricating matter.

For packing the wheels, steering gear housing, transmission, differential, universal joints, and grease cups of automobiles; for packing stuffing-boxes of motor-bats; for coating the bright parts of machinery and automobiles to prevent rust while not in use; for greasing guns and bullets, and for many other purposes.

### PRICES

Twenty-four 1-lb. tins in case	.....\$ 8.00 per case
Forty-eight 1-lb. tins in case	..... 15.00 "

## Spring Shackle Grease Cups

Will not shake off, easily filled, can operate without getting grease or dirt on hands.

Furnished in Brass or Nickel

		Brass each	Nickel each
No. 101	With $\frac{1}{8}$ in. thread	\$0.25	\$0.30
No. 102	With 5-16 x 32 thread	.25	.30
No. 103	With $\frac{1}{4}$ x 32 thread	.20	.25
No. 104	Double the capacity of No. 101 $\frac{1}{8}$ in. I. P. thread	.35	.40

When ordering grease or oil cups mention number and style of cup.



## Oil Cups



STYLE  
A



STYLE  
N

Model	Standard Thread Diam., Inch	Pitch	Optional Pipe Thread	Diam. of Cap. inch	Price each Nickeled
No. 1	1-4	32	..	3-8	\$0.10
No. 2	5-16	32	..	7-16	.14
No. 3	3-8	24	..	1-2	.16
No. 4	7-16	24	$\frac{1}{8}$	9-16	.18
No. 5	1-2	24	$\frac{1}{4}$	5-8	.22

## Oil Can Holder



This oil can holder should be attached to the front of dash, under the hood. Made of pressed steel copperized. Takes any oiler  $3\frac{3}{4}$  in. in diameter.  
No. 2. Price, each.....\$0.20

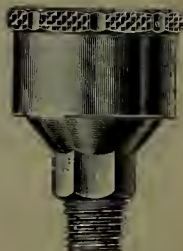
## Ratchet Grease Cups

Style	Diam.	Nipple	Capacity	Price
000	$\frac{1}{8}$ -in.	$\frac{1}{8}$ -in.	$\frac{1}{4}$ -oz.	\$0.50
00	$\frac{1}{8}$ -in.	$\frac{1}{8}$ -in.	$\frac{1}{2}$ -oz.	.60
0	$1\frac{1}{4}$ -in.	$\frac{1}{4}$ -in.	2-3-oz.	.70
1	$1\frac{1}{2}$ -in.	$\frac{1}{4}$ -in.	1 -oz.	.80
2	2 -in.	$\frac{3}{8}$ -in.	2 -oz.	1.00
3	2 $\frac{1}{2}$ -in.	$\frac{1}{2}$ -in.	3 $\frac{1}{2}$ -oz.	1.50

## Plain Grease Cups

Style	Diam.	Nipple	Capacity	Price
000	$\frac{1}{8}$ -in.	$\frac{1}{8}$ -in.	$\frac{1}{4}$ -oz.	\$0.24
00	$\frac{1}{8}$ -in.	$\frac{1}{8}$ -in.	$\frac{1}{2}$ -oz.	.30
0	$1\frac{1}{4}$ -in.	$\frac{1}{4}$ -in.	2-3-oz.	.40
1	$1\frac{1}{2}$ -in.	$\frac{1}{4}$ -in.	1 -oz.	.50
2	2 -in.	$\frac{3}{8}$ -in.	2 -oz.	.70
3	2 $\frac{1}{2}$ -in.	$\frac{1}{2}$ -in.	3 $\frac{1}{2}$ -oz.	.90

Fitted with a practical and simple ratchet attachment. Very reliable, cup cannot shake off.



Plain brass cups.  
Long knurl, sure grip caps. Fit perfectly.

## Velox Spring Shackle Bolt and Grease Cup



Bolts are hardened and ground, highest grade throughout. Complete with grease cups. Diameter given, exact size; length from shoulder end of bolt. Packed ten in a box.

Diam. of Bolt	Length from shoulder to end of bolt.	Price Each
$\frac{1}{2}$ in.	$3\frac{1}{4}$ , $3\frac{1}{2}$ , $3\frac{3}{4}$ , 4 in.	\$0.75
$\frac{3}{8}$ -16 in.	$3\frac{1}{2}$ , $3\frac{3}{4}$ , 4 in.	.85
$\frac{1}{4}$ in.	$3\frac{1}{2}$ , $3\frac{3}{4}$ , 4, $4\frac{1}{4}$ in.	.80
$\frac{3}{16}$ in.	4, $4\frac{1}{4}$ , $4\frac{1}{2}$ in.	.90
Cups only, nickel, each		.50

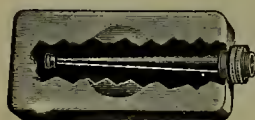
ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## AUTO OILER



### Self-Measuring—Convenient—Clean Economical

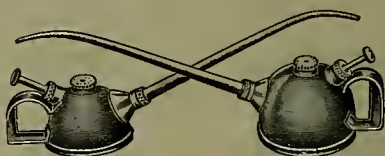
The Weaver Auto Oiler combines into one conveniently handled unit the services of the ordinary funnel, oil can and oil measure and also eliminates the inconvenience, the waste and the dirt which always accompanies the handling of oil in the ordinary manner. No garage or filling station is complete without one of these convenient Auto Oilers for each grade of oil handled.



### Kompact Oiler



### Auto Pump Oiler



Will throw a stream of oil into any part of a car. Its powerful spring makes it practically a squirt gun. Occupies less space than any other oiler of equal capacity. Measures only 3 x 6½ x 1½ inches. Capacity, ¾ pint. 4 inch reversible spout with metal cap. Drip cup at base of spout catches surplus oil. Heavily copper plated on tinned steel plate.

No. 10. Price, each .....\$1.10

### Acurately Measured

The amount of oil discharged is accurately recorded by a direct float gauge operating within a graduated brass tube, as shown in the above illustration. The height of the tube is adjustable as desired, and the recording of the float gauge within can be read from either side.

### Adjustable Spout

The long spout of heavy brass tubing can be turned downward into any position to enable it to be most conveniently inserted into the oil opening of the engine. On a great many engines the oil opening is so obstructed by the manifold or other attachments of the engine that it is almost impossible to use the ordinary type of funnel satisfactorily.

The adjustable spout of the Auto Oiler makes the most obstructed oil opening readily accessible.

### Construction

The Weaver Auto Oiler is very well constructed of heavy galvanized iron and has a capacity of 2 gallons. The indicator is very accurate, being controlled by a compensating float which will accommodate itself to the "wash" of the oil.

Shipping weight, 10 lbs.

LIST PRICE .....\$8.00

The oiler is equipped with a powerful pump, having two valves working automatically which delivers the oil to the bearings in a drop or spoonful at one stroke of the plunger depending upon the distance of the stroke. Body is seamless drawn in one piece from 20 gauge cold rolled steel, heavily copper plated.

		Each
No. 801	¼ pt. size 3¼ in. diam. 5 in. spout	\$1.95
No. 802	½ pt. size 3¼ in. diam. 9 in. spout	2.00
No. 803	1 pt. size 4¼ in. diam. 5 in. spout	2.10
No. 804	1 pt. size 4¼ in. diam. 9 in. spout	2.15

## Non-Leakable Oiler

No. 013 Steel Oiler has the metal cap that fits over end of spout, which prevents the oil from leaking in tool roll or tool box. Copperized.

	Each
No. 013 1-3 pt. size, 3¾ in. diam., 3 in. spout	\$0.50
No. 014AA ½ pt. size, 3¾ in. diam., 5 in. spout	.65

## Gem Plain Oiler

Made of the best steel, highly polished and seamless. Cheaper than any other oiler because it lasts so much longer.

	1-3-pt.	½-pt.	1-pt.
4-in. spout, steel, each	\$0.45	\$0.50	\$0.65
6-in. spout, steel, each	.50	.55	.75
9-in. spout, steel, each	.55	.60	.85

6 and 9-in. spout furnished straight or bent.



No. 013  
Steel Oiler



Gem  
Plain  
Oiler

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## OIL AND GREASE GUNS

## Townsend Grease Gun



The easiest and quickest operating gun on the market. It will load and shoot a pound of grease in 40 seconds and do it without getting any grease on your hands. It is filled through a large opening in its side, which permits quick filling, and the quadruple screw and crank handle enable you to discharge a pound of grease in 15 seconds.

lb. size. Price, each.....\$6.00  
oz. size. Price, each.....4.00

## High Pressure Grease Gun



It is generally conceded that oil is a better lubricant than grease; but for various reasons there are many wearing parts of an automobile that must be lubricated with grease, such for instance as Steering Knuckles, Spring Supports, etc. The only objection to the use of grease for this purpose is its tendency to harden, particularly when applied through openings in bolts. When grease so hardens the Grease Cup becomes useless, and the only remedy has been to disassemble and remove the hardened deposits, something which is seldom done in time to prevent serious wear of axles and bushings. The Strickler Grease Gun was designed to overcome such conditions, and after one year of constant use in a large repair shop, not a single bearing was found that this gun failed to clean and thoroughly lubricate.

## Uses Grease, Oil or Gasoline

While this gun is primarily designed for grease, it is equally efficient in applying oil and is unexcelled for washing out gritty or gummed bearings with gasoline or kerosene.

Price of gun, complete with  $\frac{1}{4}$  in. pipe thread nozzle .....\$2.25  
Additional nozzles in following sizes, each ..... .50

Male sizes	$\frac{1}{4}$ inch x 32 thread
5-16	inch x 32
$\frac{1}{4}$	inch x 18
13-16	inch x 24
$\frac{1}{4}$	inch x 20
Female sizes	$\frac{1}{4}$ inch x 18
13-16	inch x 24
$\frac{1}{4}$	inch x 20
$\frac{1}{4}$	inch x 24
1	inch x 24

## Kellogg Combination Grease and Oil Gun



Bearings are often neglected through lack of an efficient grease and oil gun. The Kellogg is constructed with a powerful rack and pinion movement, which gives ease in operation when handling the heaviest grease.

This gun can also be used with the lightest oil, in which case it is operated similarly to the ordinary types. Extra spout is furnished for oil.

Extremely well made—no punchings—all parts castings, carefully machined, insuring strength and long life.  
Price, each .....\$3.00

## Pioneer Oil and Grease Gun



A good heavy gun with many very good features. Fitted with swivel ball joint at end; this can be turned in any direction as may be desired. The entire nozzle unscrews at this ball joint for filling with oil or grease, leaving a large opening  $\frac{1}{4}$  inch diameter. This large hole allows gun to be filled easily by drawing up plunger. It will suck up any thick or light oil besides light grease. Length over all, 15 inches. Size of barrel,  $1\frac{1}{4} \times 1\frac{1}{4}$  inch. Has combination spout for oil or grease; length of spout, 3 inches; has large heavy handle that will fit nicely into hand.

Price, each .....\$2.00

## JUMBO COMBINATION GREASE AND OIL GUN



Made of the best materials, it is the most popular gun on the market. The barrel is 9 inches long and  $\frac{1}{4}$  inches in diameter and will hold 15 ounces of grease. The change from grease to oil is quickly made by turning the thumb nut. The combination spout provides for either grease or oil.

Price, each .....\$3.00

## GEM COMBINATION GREASE AND OIL GUN

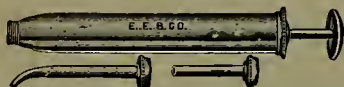


Similar to Jumbo but smaller. Capacity, 8 ounces. Barrel, 7 inches long,  $\frac{1}{4}$  inch diameter. Can be changed from grease to oil by simply turning lock nut on handle. Wheel handle is quick acting.

Price, each .....\$2.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## NO. 3 UNIVERSAL GREASE AND OIL GUN

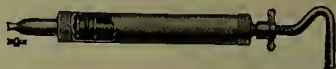


The No. 3 "Universal" Grease and Oil Gun is made of steel and handsomely brass plated. The plunger is made of cork, held in place by two steel washers. The end of the barrel has the same thread as the Ford differential, thus enabling the user to screw the barrel into the Ford differential, making a leak-proof joint.

Length of barrel, 9 in.; diameter, 1 3-16 in.; capacity, 7 oz.

Price, each .....\$1.00

## SILVER GIANT GREASE GUN



A new oil and grease gun of the highest quality. Barrel is of standard 16 gauge drawn steel tubing. Plunger of  $\frac{3}{8}$ -in. steel shafting. The piston pump head is attached in a special manner to insure rigidity.

Wing nut on handle permits adjustment for hand push or by screw leverage for hard greases. Special oil nozzle screws into handle when not in use.

A powerful efficient gun, guaranteed by the manufacturer for 5 years.

Price, each .....\$3.00

## WEAVER VALVELESS BUCKET PUMP

For Engine Oils and Heavy Greases.



For handling engine oils and soft greases, this Bucket-Pump is the most convenient and practical equipment of this kind on the market. It eliminates all waste of lubricant and enables it to be handled with absolute convenience and accuracy.

### "Three-Way" Feature.

One great advantage of the Weaver Bucket-Pump is the fact that our valveless construction permits lubricants to be handled in "three ways."

FIRST—The lubricant can be forced out of the Bucket and into the desired receptacle. SECOND—Grease or oils can be sucked out of the differential, transmission housing, etc. THIRD—The barrel or chamber of the Bucket may be sucked full of foreign lubricant and discharged again through the hose into a third receptacle without disturbing the contents of the Bucket.

SELF-MEASURING—The cylinder has a total capacity of one pound of grease or heavy oils. In handling light lubricating oils which are usually sold by liquid measurement, ten full strokes of the lever handle will discharge one quart.

STEEL HOSE—The Weaver Bucket Pump is equipped with  $\frac{3}{8}$ -inch Flexible Steel Hose which cannot be affected by the grease, as is the case with rubber hose.

CONSTRUCTION—The Bucket proper is made of heavy sheet iron and has a capacity of 25 pounds of grease. The cylinder is of 16-gauge brass tubing, two-inch diameter, containing a plunger which will not leak and is impervious to the action of grease and oils.

Each .....\$14.00

## HERCULES DRAIN PIPE SOLVENT

A scientifically prepared chemical compound that cannot fail to clear any drain pipe stoppage not caused by glass, metal or other solid substances, if properly used. Clogged up drain pipes cleared in ten minutes.

Hercules Drain Pipe Solvent is used to clear stoppages in drains, bath tubs, kitchen sinks, laundry tubs, urinals, water closets, stables, floor drains and grease traps.

Added to water makes a heavy, hot, strong solution that works its way down to the stoppage and dissolves it. It quickly destroys accumulations of lint, cloth, hair, slime, grease, sponge, vegetable matter, chewing tobacco, cigar and cigarette butts. Will not affect glass, metal or similar substances.

No fuss—no mess—no disturbance. Saves the risk, trouble and expense of taking plumbing apart to reach a stoppage. Saves tearing up floors, cutting into walls, and sometimes the digging up of a sewer. Leaves the inside of the pipe as clean as if new.

Hercules Drain Pipe Solvent is very effective for thawing frozen drain pipes, stacks, flush tanks, traps, etc. Will not injure the finest plumbing.

Money Back Guarantee—We will refund the money or replace any can of Hercules Drain Pipe Solvent at any time, which does not give entire satisfaction, provided directions are followed. Refer all complaints to Service Department.

Two pound cans, each .....\$1.00



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

Takes  
the Slant  
Out of Hills

McQUAY-NORRIS

LEAK-PROOF  
PISTON RINGS

Increase Power — Save Gas — Decrease Carbon

*The Genuine*

Immediate service on every size and over-size — over-widths and over-diameters. No extra charge for over-sizes. We have in stock all the standard sizes. There are over 3,000 unusual sizes and over-sizes made up at the factory ready for shipment. We give telegraphic service on these when necessary. McQuay-Norris LEAK-PROOF Piston Rings are used successfully in every type of motor, engine, pump and compressor. You can secure this service only with the Genuine McQuay-Norris LEAK-PROOF Piston Rings.

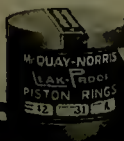
#### PRICE LIST

Always give diameter of cylinder and width of ring.

Diameter in Inches	Width and Price Each				Diameter in Inches	Width & Price Each	
	3/16	1/4	5/16	3/8		3/8	1/2 & over
2 3/8	\$1.75	\$1.75	-----	-----	6 1/4	\$2.25	\$2.25
2 1/2	1.75	1.75	-----	-----	6 3/8	2.25	2.25
2 5/8	1.75	1.75	-----	-----	6 1/2	2.25	2.25
2 3/4	1.75	1.75	-----	-----	6 3/4	2.25	2.25
2 7/8	1.75	1.75	-----	-----	6 7/8	2.25	2.25
3	1.75	1.75	\$1.75	-----	6 3/4	2.50	2.50
3 1/8	1.75	1.75	1.75	-----	6 7/8	2.50	2.50
3 1/4	1.75	1.75	1.75	-----	7	2.50	2.50
3 3/8	1.75	1.75	1.75	-----	7 1/8	2.50	2.50
3 1/2	1.75	1.75	1.75	\$1.75	7 1/4	2.50	2.50
3 5/8	2.00	2.00	2.00	2.00	7 3/8	2.50	2.50
3 3/4	2.00	2.00	2.00	2.00	7 1/2	2.50	2.50
3 7/8	2.00	2.00	2.00	-----	7 3/4	-----	2.75
4	2.00	2.00	2.00	\$2.00	7 3/4	-----	2.75
4 1/8	2.00	2.00	2.00	2.00	8	-----	3.00
4 1/4	2.00	2.00	2.00	2.00	8 1/4	-----	3.25
4 3/8	2.00	2.00	2.00	2.00	8 1/2	-----	3.50
4 1/2	2.00	2.00	2.00	2.00	8 3/4	-----	3.75
4 3/4	2.00	2.00	2.00	2.00	9	-----	4.00
4 7/8	2.00	2.00	2.00	2.00	9 1/4	-----	4.25
5	2.00	2.00	2.00	2.00	9 1/2	-----	4.50
5 1/8	2.00	2.00	2.00	2.00	9 3/4	-----	4.75
5 1/4	2.00	2.00	2.00	2.00	10	-----	5.00
5 3/8	2.00	2.00	2.00	2.00	10 1/4	-----	5.25
5 1/2	2.00	2.00	2.00	2.00	10 1/2	-----	5.50
5 3/4	2.00	2.00	2.00	2.00	10 3/4	-----	5.75
5 7/8	2.00	2.00	2.00	2.00	11	-----	6.00
6	2.00	2.00	2.00	2.00	11 1/4	-----	6.25
					11 1/2	-----	6.50
					11 3/4	-----	6.75
					12	-----	7.00

The GENUINE are packed only in this special carton under this copyrighted label. Each ring is contained in this sealed parchment container. Refuse rings which are put up in any other way.

Manufactured by  
McQUAY-NORRIS MFG. CO.  
St. Louis, U. S. A.





## PEDALS

Style "Y"



This is a neat locking and kick releasing pedal, nicely finished and suitable for the best class of work. Black finish only.

Price, each .....\$0.35

Style "M"



This pedal is in the nature of a heel button. It is very practical and neat. Intended for operating muffler cut-out or horn. Finished all black.

Price, each .....\$0.30

Style "C"

Accelerator Pedal



This rolling pedal is operated by a sliding motion of the foot forward or backward to open or close the throttle. There is a friction fulcrum which holds the pedal in a firm position after removing the foot and the position will not be changed until it is again moved by the foot.

Finished in either nickel or all black.

Price, each .....\$0.70

Style "L"



This is a substantial locking pedal for cut-out and similar purposes. Locked and released by a tap of the foot.

Each ..... \$0.50

Style "G"



A neat, strong pedal for operating Exhaust Horn. Also can be used as an accelerator. Black finish only.

Price, each .....\$0.25

G. P. Pedal



The G. P. Pedal is made entirely of steel and is strong enough to operate any cut out spring. It is so designed that by releasing one screw it can be changed to lift or pull in any direction desired.

Geared compound leverage makes it easy to operate. This is of particular importance to the motorist, especially when the pedal has to be placed in an awkward position where it is hard to reach.



## Springs, Oil Tempered

No.	Length Overall	Diam.	Gauge Wire	Each
1	5 1/4	3/4	11	\$0.08
2	5	3/4	17	.05
3	3 3/4	3/4	11	.04
4	1 1/4	3/4	16	.02
5	4 3/4	1 1/4	4	.08
6	1 1/2	1	12	.05
8	1 1/4	3/4	14	.03
10	2 3/4	1	11	.06
11	3	3/4	11	.06
12	2 3/4	1	9	.06
14	1 1/4	3/4	20	.03
15	2	7-16	13	.05
16	6	3/4	21	.06
18	8 1/2	5-16	18	.10

Box of assorted containing 25 springs of sizes mostly used.

Price, per box .....\$0.75

Price, each .....\$1.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## Style "C" Muffler Cut Out



Applied by cutting a V-shaped hole in exhaust pipe, clamping cut-out to it, and connecting valve to pedal on the footboard.

Made of malleable iron, excepting butterfly pin, which is of brass to prevent rusting and consequent sticking of valve.

Sizes  $1\frac{1}{4}$  in.,  $1\frac{3}{4}$  in.,  $1\frac{1}{2}$  in.,  $1\frac{5}{8}$  in.,  $1\frac{3}{4}$  in.,  $1\frac{7}{8}$  in., 2 in.,  $2\frac{1}{4}$  in.,  $2\frac{1}{2}$  in. ....\$0.75  
Size  $2\frac{3}{4}$  in. and 3 in. .... 1.00

## Style "H" Muffler Cut Out



Style "H" made of grey iron with solid hack instead of straps. Butterfly pin is of brass to prevent rusting.

Sizes  $1\frac{1}{4}$  in.,  $1\frac{3}{4}$  in.,  $1\frac{1}{2}$  in.,  $1\frac{5}{8}$  in.,  $1\frac{3}{4}$  in.,  $1\frac{7}{8}$  in. and 2 in. ....\$0.75  
Size  $2\frac{1}{4}$  in.,  $2\frac{1}{2}$  in.,  $2\frac{3}{4}$  in., 3 in. .... 1.00

## G. P. Muffler Cut Out



Made in two parts, thus enabling quick and thorough access to its interior. When the Cut-Out is closed, the pressure of the exhaust gases cannot open it. The course which the exhaust gases must take tends to prevent carbon accumulation on the valve or its seat. The area of the sections in every part of the Cut-Out is greater than any section of the exhaust pipe line, therefore the relief of the motor is complete and the volume of sound intensified.

Sizes  $1\frac{1}{4}$ ,  $1\frac{1}{2}$  and  $1\frac{3}{4}$  inch, each ....\$4.50  
Size 2,  $2\frac{1}{4}$  and  $2\frac{1}{2}$  inch, each .... 5.00  
Size  $2\frac{3}{4}$ , 3 and  $3\frac{1}{4}$  inch, each .... 5.50  
Above sizes refer to outside diameter of exhaust pipe.

## Style "D" Muffler Cut Out



Style "D" muffler cut-out is made of malleable iron and clamps on the exhaust pipe after a V-shaped hole has been cut in the pipe. The valve is in a pocket at the bottom and opens inward. It will not leak as the conical valve is held against the seat by the pressure of the exhaust in addition to the spring.

Sizes  $1\frac{1}{4}$  in.,  $1\frac{1}{2}$  in.,  $1\frac{5}{8}$  in.,  $1\frac{3}{4}$  in.,  $1\frac{7}{8}$  in. and 2 in. ....\$1.25  
Size  $2\frac{1}{4}$  in.,  $2\frac{1}{2}$  in.,  $2\frac{3}{4}$  in. and 3 in. .... 1.50

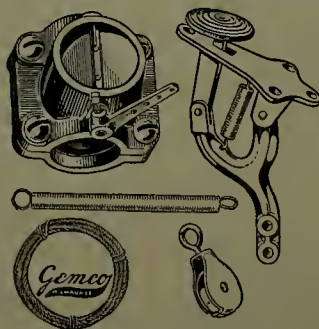
## Style "G" Horn Valve



Made of malleable instead of grey iron as commonly used. The butterfly gates are closely fitted on heavy brass pins, which will not rust and prevent free action of the gates. The direct passage to horn and cut-out affords maximum pressure on horn and perfect relief to muffler.

Sizes  $1\frac{1}{4}$  in.,  $1\frac{3}{4}$  in.,  $1\frac{1}{2}$  in.,  $1\frac{5}{8}$  in.,  $1\frac{3}{4}$  in.,  $1\frac{7}{8}$  in., 2 in. and  $2\frac{1}{4}$  in. ....\$1.00  
Size  $2\frac{3}{4}$  in.,  $2\frac{1}{2}$  in. and 3 in. .... 1.20

## Cut Out Outfits



For the Dodge and Studebaker Cars

No. 10—Dodge, 2-inch bore, complete, packed in carton ....\$1.05  
No. 12—Studebaker, 2-inch bore, complete, packed in carton .... 1.05

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## RAYBESTOS BRAKE LINING

**CONSTRUCTION.** Raybestos is a solid woven asbestos fabric made 90 per cent. to 95 per cent. long fibre asbestos, interwoven with brass wires and impregnated with a special heat and wear resisting compound that gives it a wearing life found in no other brake lining. It contains no layers, plies nor rubber compound, and is therefore impervious to extreme heat, oil and weather conditions.

**ADAPTABILITY.** Raybestos can be used wherever a high-grade friction material is required. As brake lining it is particularly adaptable on automobile pleasure cars and trucks.

**NOTE.** The genuine has silver edges and the name Raybestos stamped on every foot. As there are many imitations, it is important that you always look for these distinguishing marks.

### GUARANTEED FOR ONE YEAR

If Raybestos fails to give one full year continuous, satisfactory service from the date it is put on the brakes, new lining will be furnished without charge. This guarantee applies to all types and weights of pleasure cars and all light trucks.

### RAYBESTOS STANDARD PRICE LIST

WIDTHS	THICKNESS					
	1-8	5-32	3-16	1-4	5-16	3-8
1"	.34	.38	.45	.59	.74	.89
1 $\frac{1}{8}$ "	.36	.41	.49	.65	.80	.96
1 $\frac{1}{4}$ "	.38	.45	.53	.70	.87	1.03
1 $\frac{1}{2}$ "	.42	.51	.61	.80	.99	1.18
1 $\frac{3}{4}$ "	.49	.59	.72	.93	1.14	1.35
2"	.55	.68	.80	1.05	1.31	1.56
2 $\frac{1}{4}$ "	.61	.76	.89	1.18	1.47	1.77
2 $\frac{1}{2}$ "	.68	.84	.99	1.31	1.62	1.92
2 $\frac{3}{4}$ "	.73	.92	1.09	1.42	1.76	2.14
3"	.78	.99	1.18	1.54	1.89	2.33
3 $\frac{1}{4}$ "	.84	1.05	1.26	1.65	2.03	2.51
3 $\frac{1}{2}$ "	.89	1.12	1.35	1.76	2.17	2.70
3 $\frac{3}{4}$ "	.94	1.19	1.43	1.87	2.30	2.89
4"	.99	1.26	1.52	1.98	2.44	3.08
4 $\frac{1}{4}$ "	1.02	1.34	1.60	2.09	2.58	3.15
4 $\frac{1}{2}$ "	1.07	1.40	1.68	2.20	2.71	3.25
4 $\frac{3}{4}$ "	1.12	1.47	1.77	2.31	2.85	3.34
5"	1.16	1.54	1.85	2.42	2.99	3.38
5 $\frac{1}{2}$ "	1.26	1.61	2.02	2.64	3.26	3.63
6"	1.37	1.68	2.19	3.07	3.53	3.82

Effective Feb. 25, 1919

Copies of the Price List supplied in quantities upon request.

THE RAYBESTOS COMPANY  
BRIDGEPORT, CONN.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



The RAYBESTOS Display Cabinet shown below is consigned free to the dealer or garage placing an initial stock order with us for RAYBESTOS for not less than 500 feet of assorted sizes.

These Racks are shipped direct from the factory, with an assortment of advertising matter.



## Raybestos MOLDED DISC-CLUTCH Facings

After two or more years of experimenting the Raybestos Company has announced a new type of facing for multiple disc facings. This is known as Raybestos Molded Disc Clutch Facing. (Patented).

This improved facing is composed of pure asbestos with a suitable binder molded under pressure, insuring absolute homogeneity and accuracy quite impossible with the woven type of facing which was composed of asbestos spun around the composition wire, to give the required tensile strength, this in turn woven into a tube subsequently formed into a ring. One great advantage of the Raybestos Molded Facings is that it can be made endless, which is not practicable in the manufacture of woven facings.

Raybestos Disc Facings are put up in boxes, 20 rings of one size only in a box, the size of the rings plainly marked on the box, as well as the names of the various leading cars that require these rings on their clutches.



The following disc clutch facings are the most prominently in demand and are used on practically all cars on the market:

Size	Clutch	Price Per Ring
8 7/16 x 6 1/4 x 5/32	Brown & Lipe	\$0.86
9 7/8 x 6 7/8 x 1/8	Borg & Beck	1.13
11 7/8 x 8 3/8 x 1/8	Borg & Beck	1.62
7 3/4 x 5 3/4 x 9/64	Cadillac	.70
9 x 7 11/32 x 5/32	Chalmers	.67
8 x 6 x 9/16	Packard	.82
9 x 6 3/4 x 1/8	Dodge	.76
7 7/8 x 5 3/8 x 1/8	Saxon	.87
8 x 6 x 5/32	Fuller	.67

## Velox Sheet Asbestos Packing



Conditions of gas and gasoline engine work have proved that ordinarily organic packings are totally unreliable for his purpose.

We offer a specially prepared, tightly woven, pure asbestos and wire cloth to meet the severe requirements incident to this service.

Furnished in rolls 40 inches wide, weight per square yard about 6 pounds. Thickness 1-16 in.

Price, per lb. ....\$1.25

## Black and White Sheet Packing

A very high class packing composed of a special composition of asbestos fibre and rubber. Very tough and will stand up under the most severe tests.

Furnished in sheets 48 inches square and in two thicknesses—1-16 in. and 1-32 in.

Price, per lb. ....\$1.50

## Sheet Cork



Sheet Cork is one of the best materials on the market for making gaskets such as cylinder head and crank case gaskets. Makes an absolutely tight, leakable joint.

Sheets, 36 in. x 12 in. x 1-16 in., each.....\$0.40

## Twisted Valve Stem Packing

Made in braided or twisted form from absolutely pure long fibre asbestos yarn. Each strand thoroughly lubricated.

Two sizes.

1/2 lb. spools .....\$0.75  
1 lb. spools .....1.25



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## Round Asbestos Wicking



Asbestos wicking, used for packing where sheet cannot be used.

¼ lb. ball .....\$0.40

## Candle Wicking

For Pump Packing.

Price per ball .....\$0.25

## Shim Stock



This stock is essential in every well regulated shop and is put up in convenient packages. It is supplied in thicknesses varying from .002 to .015 of an inch in ¾-inch strips, as illustrated.

No. 1 box contains 250 square inches, assorted.

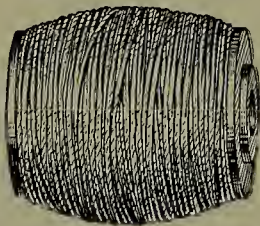
Price, per box .....\$1.80

## Sheet Brass

For Shimming Bearings, Etc.

.002 thick, per sheet, 6 inches by 48 inches.....\$0.40  
 .003 thick, per sheet, 6 inches by 48 inches..... .50  
 .005 thick, per sheet, 6 inches by 48 inches..... .60  
 .010 thick, per sheet, 6 inches by 48 inches..... .70

## Asbestos Yarn



This is a soft, strong asbestos yarn. Excellent packing for spark plug porcelains.

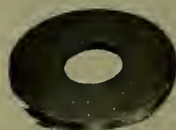
¼ lb. ball .....\$0.35

## Sheet Felt



¾ inch thick.	Per lb.	.....\$3.00
¾ inch thick.	Per lb.	..... 3.00
¾ inch thick.	Per lb.	..... 3.00
¾ inch thick.	Per lb.	..... 3.00

## Felt Washers



One-quarter inch thick; for wheel bearings, rear axle transmission or engine or in any place where oil or grease is inclined to leak.

	Each
No. 1— ½x ¾ inch	.....\$0.05
No. 2— ¾x1 inch	..... .05
No. 3—1 x1½ inch	..... .08
No. 4—1½x1¾ inch	..... .10
No. 5—1½x2 inch	..... .12
No. 6—2 x2½ inch	..... .15
No. 7—2½x3 inch	..... .20

## Washer Assortment

This consists of three each Nos. 1 and 6; four each Nos. 2, 3, 4 and 5; and two No. 7.

Price, per package (24 washers) .....\$0.75

## Cylinder Head Gasket



Made with a double sheet of the best copper, lined with asbestos. All holes are perfectly centered and replaces the old gasket without any trouble. Is exactly the same as the original gasket furnished on Dodge car.

Each .....\$1.00

Also made for the following cars:

Overland 85, each	.....\$1.25
Overland 83-4, each	..... 1.25
Chevrolet 490, each	..... 1.00
Maxwell 25, each	..... 1.00

These gaskets exactly replace the original gaskets in all cases.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## COPPER ASBESTOS GASKETS



## COPPER-ASBESTOS ROUND GASKETS

## Standard Closed Type

Size	inches.	Price Per doz.	Per 100
1	x 1 1/4	\$.24	\$1.04
1	1/16 x 1 5/16	.24	1.16
1	1/8 x 1 3/8	.24	1.30
1	3/16 x 1 7/16	.24	1.35
1	1/4 x 1 1/2	.30	1.50
1	1/4 x 1 5/8	.30	1.60
1	5/16 x 1 1/2	.30	1.60
1	3/8 x 1 5/8	.30	1.75
1	1/2 x 1 13/16	.35	1.78
1	7/16 x 1 11/16	.35	1.80
1	1/2 x 1 3/4	.35	1.90
1	9/16 x 1 13/16	.35	1.94
1	5/8 x 1 7/8	.35	1.96
1	11/16 x 1 15/16	.35	1.98
1	3/4 x 2	.35	2.00
1	13/16 x 1 15/16	.35	2.02
1	13/16 x 2 1/16	.35	2.04
1	7/8 x 2 1/16	.35	2.05
1	7/8 x 2 1/8	.40	2.12
1	15/16 x 2 3/16	.40	2.15
1	61/64 x 2 7/64	.40	2.18
1	3/4 x 2 1/4	.40	2.20
1	1/16 x 2 1/4	.40	2.20
1	1/16 x 2 5/16	.40	2.24
1	5/64 x 2 15/64	.40	2.26
1	3/32 x 2 7/32	.45	2.38
1	3/32 x 2 9/32	.45	2.30
1	1/8 x 2 3/8	.45	2.40
1	3/16 x 2 7/16	.45	2.44
1	1/4 x 2 7/16	.45	2.45
1	1/4 x 2 1/2	.45	2.48
1	9/32 x 2 17/32	.45	2.52
1	3/8 x 2 5/8	.45	2.55
1	13/32 x 2 19/32	.45	2.60
1	7/16 x 2 11/16	.45	2.64
1	1/2 x 2 3/4	.45	2.70
1	5/8 x 2 7/8	.45	2.74
1	17/32 x 2 7/8	.45	2.80
1	3/4 x 3	.55	3.04
1	13/16 x 3 1/16	.55	3.10
1	3/4 x 3 1/8	.55	3.20
1	7/8 x 3 1/8	.55	3.30
1	15/16 x 3 3/16	.55	3.32
1	x 3 1/4	.55	3.34
1	1/16 x 3 5/16	.55	3.35
1	1/8 x 3 3/8	.55	3.56
1	3/16 x 3 7/16	.65	3.95
1	1/4 x 3 1/2	.65	4.05
1	5/16 x 3 9/16	.65	4.10
1	3/8 x 3 3/4	.75	4.20
1	7/16 x 3 11/16	.75	4.30
1	1/2 x 3 3/4	.85	4.40



## OVAL COPPER-BRASS-ASBESTOS GASKETS

For Intake and Exhaust Pipes, Manifolds, Carburetors, etc. Standard Flange Type.

Size	Price per Doz.	Per 100
1 inch	\$.80	\$3.60
1 1/8 inch	.80	3.70
1 1/4 inch	.90	3.80
1 3/8 inch	1.00	4.18
1 1/2 inch	1.10	4.24
1 5/8 inch	1.20	4.68
1 3/4 inch	1.30	4.74
1 7/8 inch	1.40	5.80
2 inch	1.50	6.20
2 1/8 inch	1.60	7.80
2 1/4 inch	1.70	8.10
2 3/8 inch	1.80	9.36
2 1/2 inch	1.90	9.44
2 3/4 inch	2.20	10.40
3 inch	2.40	11.20
3 1/2 inch	3.20	14.20

## SPARK PLUG GASKETS

Stock No.	I.D. & O.D.	Per Doz.	Per 100
1138a A. L. A. M.	7/8x1 1/8	\$0.18	\$1.00
1138 (1/2 in. Plug)	27/32x1 3/32	.18	1.00
1137 (Metric)	23/32x63/64	.18	1.00

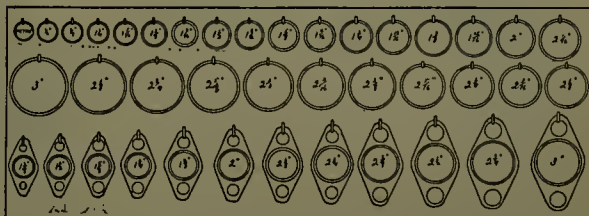
## GASKET ASSORTMENTS

No. 1. Consists of 186 Round Gaskets: 1/2 doz. each 1 1/4, 1-5/16, 1 1/8, 1-7/16, 1 1/4, 1-9/16, 1 1/2, 1-11/16, 1 3/4, 1-13/16, 1 7/8, 1-15/16, 2, 2-1/16, 2 1/8, 2-3/16, 2 1/4, 2-5/16, 2 3/8, 2-7/16, 2 1/2, 2 5/8, 2 3/4, 2 7/8, 3 inch. 1 dozen each: 1, 7/8 Metric Spark Plug Gaskets and 28 Wire Screw Hooks. Every size with tag and size marked thereon.

No. 1. Price, per assortment.....\$4.00

No. 2. Consists of 72 Oval Exhaust Gaskets: 1/2 dozen each, 1 1/8, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/8, 2 1/4, 2 3/8, 2 1/2, 2 3/4, 3 inch and 1 Doz. Wire Screw Hooks. Every size with tag and size marked thereon.

No. 2. Price, per assortment.....\$5.00



For the convenience of keeping your stock in good order we suggest equipping a board 30 by 18 inches with hooks, as per diagram.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



4 oz. Duplex Can contains two grades.  
C. For Roughing.  
A. For Finishing.

## Clover Grinding and Lapping Compound

Clover Compound is a patented mixture of petroleum hard oil with an abrasive. The abrasive used is one of the hardest and sharpest known, and the grease binder possesses certain qualities to be found only in this compound. Will stand temperatures of over 200 deg. F. and will not break down under severe friction.

### PRICE

4 oz. can, each .....\$0 45  
1 pound can, each ..... 1 40



One Pound Can.

## Carborundum Valve Grinding Compound



Is put in a combination can containing coarse and fine paste. The can, 2 inches high,  $1\frac{1}{2}$  inch diameter, is divided into two distinct compartments, one containing fine, the other coarse compound.

Is far superior to any other material for valve grinding. It cuts faster and cleaner, leaving a smooth, uniform surface. The coarse compound is used first for roughing in the valve; the fine compound then gives the valve seat a perfectly true polished surface.

Per can .....\$0.25

## Carborundum Paper and Cloth



No.	Cloth in Sheets.		Paper in Sheets.	
	Quire.	Dozen.	Quire.	Dozen.
180 to 90	\$.130	\$0.70	\$0.45	\$0.25
80	1.40	.75	.50	.30
70	1.50	.80	.50	.30
60	1.60	.85	.55	.35
50	1.70	.90	.65	.40
36	1.80	.95	.70	.45

### Carborundum Cloth in Rolls.

Put up in rolls 50 yards long,  $1\frac{1}{2}$  inches wide. Very handy for repair shops. Fine, medium or coarse.

Roll, each .....\$2.75

Made in Seven Grades.

1A—Very fine. A—Fine. B—Medium. C—Medium coarse. D—Coarse. E—Very coarse.

50 special, exceedingly coarse, for use on very heavy work.

## Rapid Cut



This Abrasive Powder is unequalled for grinding in all kinds of valves. It is put up in special form—a tin box holding two smaller boxes, one filled with Rapidcut the other empty, in which can be mixed a small quantity of oil and powder, when same is needed, thus keeping the supply free from grit or dirt.

Price, per can .....\$0.2

## Carborundum Wheel



Carborundum is the fastest cutting material known and owing to its hardness will outlast all others.

Diam. Inches	Thickness of wheel.		
	$\frac{1}{2}$	$\frac{3}{4}$	1
4	\$.140	\$1.65	\$1.9
5	1.90	2.25	2.6
6	2.40	2.90	3.4

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## Steamtite Cement



## For Cracked Cylinders

Steamtite is a fine metallic powder which when mixed with our liquid chemical forms a cement which is absolutely unaffected by water, steam or oil. In fact, it will set hard in boiling water. In setting, it expands so much that it will stop a crack or leak absolutely tight against a water pressure of 3,000 pounds. Does not require the assistance of tape, straps or clamps—JAM IT IN THE CRACK, that's all.

- o. 1. Packages, each .....\$1.00  
o. 2. Packages, each ..... 2.00

## Smooth-On Iron Cement



This cement repairs cracked water jackets, or circulating pipes, leaky radiator tubes, etc. Expands and contracts same as iron, and is not affected by heat, cold, water or gasoline.

One 1-lb. can No. 1 Smooth-On iron cement, one 1-lb. can Elastic Smooth-On iron cement, one roll Smooth-On Tape, one instruction book.

Price .....\$1.25

## Se-ment-ol

## Radiator Cement

"It finds the leak and fixes it"

The original self-acting radiator cement, a dry powder when poured into the warm water of the radiator dissolves immediately. As it reaches the leak and strikes the air it congeals, stopping the leak permanently and quickly. It forms a film on the lips of the leak and builds film upon film, forming an elastic repair which cannot be torn down by the action of the water or the vibration of the car.

One 75 cent can will repair a cooling system holding 12 gallons of water.

Retail Price, 7 oz. can Powder.....\$0.75

## Se-ment-ol Liquid

The circulating water in the cooling system carries Se-Ment-Ol to the leak and as it reaches the air it congeals instantly, forming an elastic repair which cannot be torn down by the action of the water or the vibration of the car. The heat from the motor hardens the repair, making it permanent. Draining of the radiator is not necessary; in fact, the Se-Ment-Ol Liquid in the cooling system will automatically repair any new leaks that may develop. One 75 cent can will repair a cooling system holding six gallons of water.

Retail Price, 10 oz. can Liquid.....\$0.75

## "X" Radiator Liquid

"X" Radiator Liquid will repair leaky automobile radiators or cracked water jackets in ten minutes without solder or welding. Makes cooling system leak-proof, rust-proof and scale-proof. Will work in alcohol or other anti-freezing solutions.

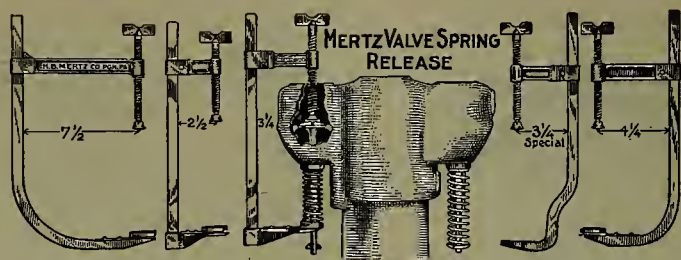
Truck size, each .....\$2.00

Large size, for large radiators, each ..... 1.50

Small size, for Ford and small radiators, each..... .75

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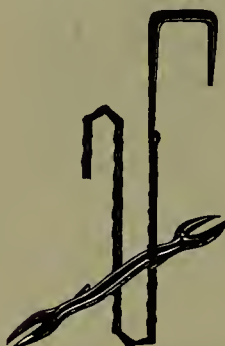


Adapted to Motors used on Automobiles, Motor Boats or Aeroplanes. The sliding Arm locks on bar automatically at any positions, required to raise or lower the Valve Spring.

Adjustable Gauge for centering Valve Stem in Fork insures direct lift. Leaves both hands Free to remove or insert Key, Pin or Disc. The best selfsupporting Valve Spring Release.

Price, \$2.00 each for size No. 2 1/2 and No. 3 1/4, and \$2.25 each for size No. 3 1/4 Special and No. 4 1/4, \$2.50 for size No. 7 1/2.

### Chain Valve Spring Release



This is without doubt the most practical tool ever made to remove valves.

Will fit any motor. The lever has a narrow fork at one end and a wide one at the other to accommodate valves having split washers or pins to hold the spring on the stem.

Finish: White nickel.

Price, each .....\$0.60

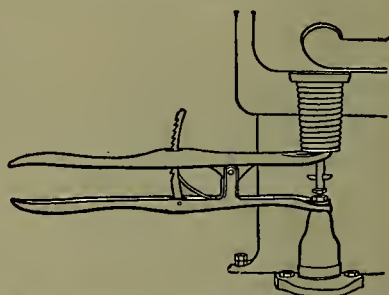
### Vlcek Valve Lifter



This is the easiest operated valve lifter on the market. It is drop forged and made with a slide cam that expands the ends. The leverage is considerably greater than in the thumb nut type of this style valve lifter usually offered, making the lifting of the spring easy.

Price, each .....\$1.25

### Eclipse Valve Remover



Entirely automatic, ratchet lever holds valve spring in any position and enables operator to remove both hands from tool.

Each .....\$0.40

### Rives Pedal Pads



Holds the foot firmly on clutch and brake pedal, highly resilient and adhesive. It prevents harmful pressure on ball of the foot. Prevents wear and tear on shoes. Non-conductor of heat, eleven different designs covering every car made. In ordering be sure to mention name, year and model of car.

Per set .....\$1.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## STENMAN ELECTRIC VALVE GRINDER

The Stenman Electric Valve Grinder bears the same relation to hand valve grinding that the vacuum cleaner does to the old broom method of carpet cleaning.

Will grind a set of eight valves in 20 minutes, whereas it takes two hours or more to grind them by hand, and we guarantee the Stenman to do a better and more even job.

Also that a novice can operate it.

Plugs in on any lamp socket—A or D current. Regular stock 110, 130 volts, made for higher voltage where required.

Will pay for itself in a short time in any garage caring for a number of cars.

Price, each .....\$50.00



### HUDSON-VALVE GRINDER

The Hudson Valve Grinder is operated by placing between palms of hands and oscillating by rubbing hands.

Price, each .....\$1.50

### UNIVERSAL VALVE GRINDER

An adjustable valve grinder that will fit the valve tops of all cars whether slotted or drilled. The brace type is the ideal construction for valve grinders.

Can be used on Ford cars also. Length, 21 inches. Not to be used as a brace screw driver.

No. 610, each..\$1.00



### KELLOGG VALVE GRINDER

Turning the handle in one continuous direction gives the valve the necessary reciprocating motion to give a perfect valve seat.

Made of malleable iron and furnished with combination bit to fit various types of valves.

With this tool valves are properly ground with less effort and in half the time ordinarily required.

Price, each .....\$3.50



### SIOUX STANDARD VALVE TOOL SET

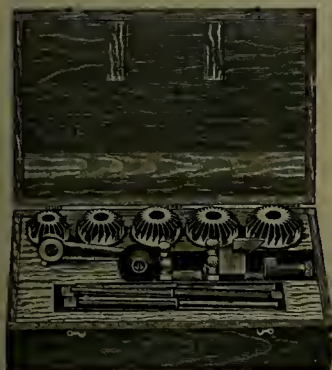
Sioux Valve Seat Reamers replace valve seats with dispatch, accuracy and smoothness.

The Sioux Valve Tool Set illustrated is complete enough to take care of practically all the jobs that an auto repair shop or garage is likely to get.

Set includes five reamers, for valve seat cutting from 1½ to 2¼ inch diameters, 45 degrees and three pilot stems, 5-16, ¾ and 7-16. The valve cutter is made on the reamer principle and is guaranteed to work with absolute accuracy and smoothness.

The pilot stems are finished to accurate size, insuring perfect dimensions and smoothness. In hardwood case.

Price, each .....\$25.00



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## SOLDER AND SOLDERING TOOLS

## Solderall



SOLDERALL is a wonderful new solder and non-corrosive flux combined, in paste form and contained in a collapsible tube always ready for instant use.

No acids, rosin or flux necessary.

All you have to do is to unscrew the cap from the nozzle of the tube, squeeze a little SOLDERALL on the parts to be soldered and heat with a match, hot iron or torch, and the work is done.

Large size .....\$0.50



## Nokorode

Reliable, economical, non-corrosive. Best soldering paste made. Always ready for use.

2 oz. cans, each.....\$0.20

## Soldering Coppers



Soldering coppers, pointed.

Wt., each, lbs.	1/2	1
Price, each	.....\$0.75	\$1.00

## Brass Brazing Wire



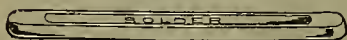
Nine gauge. Price, per pound .....\$0.80

Soft Annealed  
Iron Brazing Wire

In 12 lb. rolls, for use in brazing, etc. Needed in every repair shop.

12 lb. roll (2676 ft.), price, per lb. ....\$0.20

## Solder



Solder, half and half, extra fine, guaranteed half tin and lead.

Price, per pound .....\$0.70

## Wire Solder

Ten gauge. Price, per pound .....\$0.70



## Kester Acid-Core Wire Solder

(Ready to use)

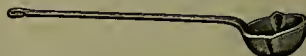
Kester Acid Core Wire Solder is a self fluxing wire solder. The solder (strictly tin and lead) is a hollow wire filled with an acid soldering flux. No other flux or acid is required. It will solder any metal except aluminum, and is especially suited to automotive repair work. It is cheaper to use than solid wire or bar solder, as no time is lost hunting, preparing or applying the acid soldering flux.

Use it for radiator leaks, spark plug terminals, cracked fenders, gasoline pipe and tank joints, battery terminals, electrical connections, speedometer, flexible shaft and general garage use.

Sold on one, five and ten pound spools. Size 1/8 in. diameter.

Price, per lb. ....\$0.75

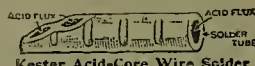
## Red Hot Ladles



Made of the best wrought steel, with extra deep bowls.  
No. 120, with 3-inch bowl. Price, each.....\$1.00



1 lb. bars, each .....\$2.00



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## The Marvel Decarbonizer



A simple, very effective, and economical outfit for removing every particle of carbon in automobile cylinders. An outfit just as essential to a modern garage as the gasoline storage tank and a bigger source of revenue than gasoline or oil. It will destroy every trace of carbon in the cylinders of an automobile or motor-boat with such ease that one wonders how this very essential operation could ever have been accomplished thoroughly without it. It is as harmless as a toy—operates without the slightest fuss. To clean a four or six-cylinder engine a very small amount of oxygen is used and the whole job can be done in thirty minutes. Bear in mind that we do not furnish either oxygen or oxygen tanks with the Marvel outfit.

Outfit complete (without Oxygen Tank).....\$15.00

## Mound Carbon Scrapers



Designed for use in removing soot from the top of a piston without taking off the head of cylinder. Made of  $\frac{1}{4}$  inch crucible steel. Hand forged. Nickel plated. Fastened into applewood handle.

Set of 3, each set packed in a neat box, extra .....\$1.25

## Nelson Carbon Scrapers



Used to scrape carbon from engine cylinders of automobiles and gas or gasoline engines. Each set packed in a neat box.

Price, per set of three .....\$0.90

## Cox Welding Outfit



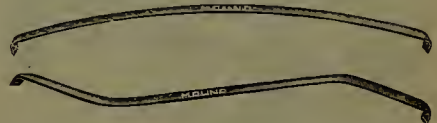
For Garage and Shop Use.

Will Handle Any Ordinary Job.

Complete outfit consists of 1 No. 0 brass finished welding torch with five interchangeable tips. 1 oxygen reducing and regulating valve with gauge brass finish; 1 acetylene reducing and regulating valve with gauge; 1 decarbonizing torch with flexible tip; 9 feet black 5 ply oxygen hose with couplings; 9 feet red acetylene hose with couplings; 1 pair goggles; 1 asbestos swab for decarbonizing cylinders; 1 adapter for large acetylene tank. Assortment of welding rods, aluminum, brass, cast iron, special bright steel, cast steel annealed Norway iron, 1 can each brass, cast iron, and lighting aluminum flux, 1 wrench. In special brass bound case with full directions.

Price, without tanks .....\$50.00

## Mound Flexible Carbon Scraper



The latest and most improved tool for scraping carbon from cylinder of engine, etc. Can be bent in any shape. Made of special steel, very flexible. Carbon can be removed in half the time than with the old style tool.

Price, each .....\$0.25

## Nelson Curved Bearing Scrapers



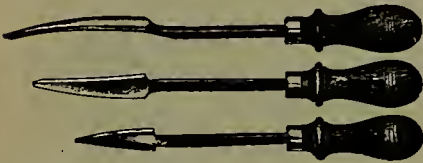
Made of high grade tool steel, hardened, hollowed; and packed in a box.

Price, per set of three .....\$1.40

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



### Mound Curved Bearing Scrapers



Are forged from finest grade of imported steel, properly hardened and hollow ground. Well mounted in rosewood handles. These scrapers have the proper curve for effective work, and should be in the hands of every mechanic. Three sizes, as shown in set.

Per set of 3, extra .....\$2.00

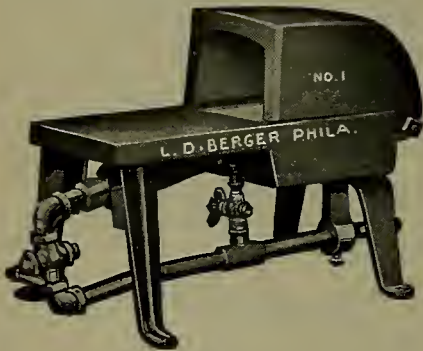
### Three-Square Scraper



Made of the best file steel and hollow ground, with hard maple handle, stained and polished.

Each .....\$0.40

### Gas Furnace



No. 1

This furnace is very strongly made of the best materials, is equipped with a pilot light, and will stand a little rougher usage than it is ever likely to receive. Without the need of a blower, it shoots out a powerful hot blast at the touch of the lever. Consumes 10 feet of gas an hour. Length, 12 in.; weight, 12 lbs.; fire pot opening, 3½x2½ in.

No. 1, each .....\$7.50

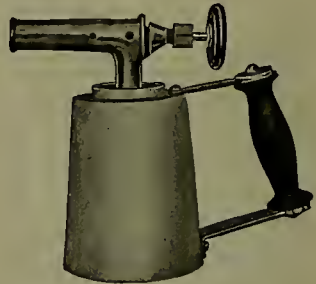
No. 101

Is super-heated with two bunsens, which can be used separately. This is one of the most powerful atmospheric gas furnaces yet produced.

Consumes 10 to 20 feet of gas in an hour. Is 14 in. long; weight, 18 lbs.; the fire pot opening is 4½x2¼ in.

No. 101, each .....\$10.00

### Phoenix Pumpless Gasoline Torch



Safe, simple, strong. Cast aluminum alloy container, no seams or washers, is designed and operated on the principle of liquid expansion; by filling the priming cup on top of container with gasoline, and lighting, the heat is carried to gasoline in the container, which on becoming heated expands and creates a natural pressure, forcing the gasoline up through vent hole in neck of nozzle and around valve stem, at the same time the flame from cup has heated the nozzle sufficiently so that when valve is turned on the jet of gasoline is turned into a gas, which is ignited by flame from cup, the cup holding just enough gasoline to prime the torch.

No. 2. ¾ pt., each .....\$3.00  
No. 3. 1½ pt., each .....3.50

### Blow Torch



With automatic spring valve pump in handle, made of 18 gauge brass, recommended for all requirements. Height, 9¼ in. diameter, 4 in. shipping weight, 5 lbs. Consumption of fuel about ½ pint per hour.

Price each  
No. 215. Quart size...\$9.00  
No. 315. Pint size.... 6.50



For holding soldering copper we include without extra charge steel attachments that can be easily and securely applied.

### Blow Pipe

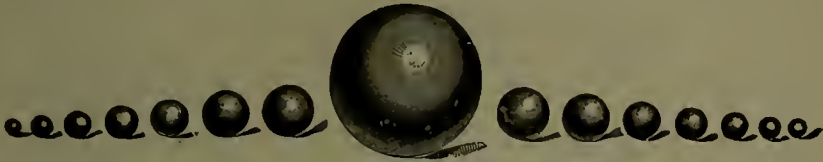


No. 8-E. Medium, 3-16 in. air jet, ¼ in. gas opening .....Price, each.\$5.00  
No. 8-F. Large, 5-16 in. air jet, 1 in. gas opening .....Price, each. 7.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## STEEL BALLS



## High Duty AA. Grade

These balls are especially adapted for automobile use, being made exact in size, of the best material, and will stand the hardest test. Special sized balls will be furnished at special prices when ordered in quantity. Also brass or bronze balls.

Sizes.....	1-16	3-32	$\frac{3}{16}$	5-32	3-16	7-32	$\frac{1}{4}$	9-32	5-16	$\frac{3}{8}$
Price, per 100	\$0.50	\$0.50	\$0.20	\$0.30	\$0.32	\$0.40	\$0.50	\$0.60	\$1.00	\$1.50
Sizes.....	7-16	$\frac{1}{2}$	$\frac{9}{16}$	9-16	$\frac{5}{8}$	11-16	$\frac{3}{4}$	13-16	$\frac{7}{8}$	15-16
Price, each	\$0.04	\$0.05	\$0.08	\$0.10	\$0.11	\$0.12	\$0.15	\$0.15	\$0.15	\$0.18
Sizes.....	1	1 $\frac{1}{2}$	1 $\frac{3}{4}$	1 $\frac{1}{2}$	1 $\frac{3}{4}$	1 $\frac{1}{2}$	1 $\frac{3}{4}$	1 $\frac{1}{2}$	1 $\frac{3}{4}$	2
Price, each	\$0.18	\$0.20	\$0.30	\$0.40	\$0.50	\$0.60	\$0.75	\$0.90	\$1.30	

## Bessemer, Machine and Drill Rod Steel



## Bessemer Steel Rods, Round, in 4 foot lengths

Size, inches, 1-16, 3-32, $\frac{1}{8}$ , per lb.	Prices on application
Size, inches, 5-32, 3-16, 7-32, $\frac{1}{4}$ , 5-16, $\frac{3}{8}$ , 7-16, $\frac{1}{2}$ , 9-16, $\frac{5}{8}$ , $\frac{3}{4}$ , per lb.	Prices on application

## Cold Rolled Steel—Extra Quality

## Round, Hexagon and Square. In 10 to 15 Foot Lengths

Size, inches, round: 3-16, $\frac{1}{4}$ , 5-16, $\frac{3}{8}$ , 7-16, $\frac{1}{2}$ , $\frac{5}{8}$ , $\frac{3}{4}$ and 1 inch.	Per lb.....Prices on application
Size, inches, hexagon: $\frac{1}{4}$ , 5-16, $\frac{3}{8}$ , 7-16, $\frac{1}{2}$ , 9-16, $\frac{5}{8}$ , $\frac{3}{4}$ and 1 inch.	Per lb.....Prices on application
Size, inches, square: $\frac{3}{8}$ , 3-16, $\frac{1}{4}$ , 5-16, $\frac{3}{8}$ , 7-16, $\frac{1}{2}$ , 9-16, $\frac{5}{8}$ , $\frac{3}{4}$ and 1 in.	Per lb.....Prices on application

## Drill Rod, Polished Steel

## Carried in 3 Foot Lengths

Size, inches: 1-16, 5-64, 3-32. Per lb.....	Prices on application
Size, inches: 7-64, $\frac{1}{8}$ , 9-64, 5-32. Per lb.....	Prices on application
Size, inches: 3-16, 13-64, 7-32, 15-64, $\frac{1}{4}$ , 17-64, 9-32, 19-64, 5-16, 21-64, 11-32, 23-64, $\frac{3}{8}$ , 25-64, 13-32, 27-64. Per lb.....	Prices on application
Size, inches: 7-16, 29-64, 15-32, 31-64, $\frac{1}{2}$ . Per lb.....	Prices on application
Size, inches: 17-32, 9-16, 19-32, $\frac{3}{8}$ , 21-32, 11-16, 23-32, $\frac{1}{4}$ . Per lb.....	Prices on application

## Hard Red Fibre Sheets



Fibre may be sawed, worked in a lathe or planed, riveted, punched, drilled and tapped, and will take a fine polish. A high insulator.

12x12 inches,  $\frac{1}{4}$  in. thick. Per sq. ft.....\$0.75

We do not sell sheet fibre in less quantity than 12x12 inch sheets.

## Round Hard Red Fibre Rod

Diameter, $\frac{3}{8}$ inch, per foot	\$0.40
Diameter, $\frac{1}{2}$ inch, per foot	.60
Diameter, $\frac{3}{4}$ inch, per foot	1.50
Diameter, 1 inch, per foot	3.75

## Hard Rolled

## Red Fibre Tubing



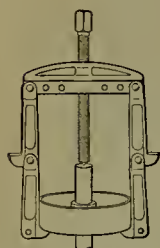
Thickness of Wall,  $\frac{1}{8}$  inch.

Inside diameter $\frac{1}{2}$ in. Price, per foot.....	\$0.48
Inside diameter $\frac{3}{4}$ in. Price, per foot.....	.64
Inside diameter 1 in. Price, per foot.....	.80
Inside diameter 1 $\frac{1}{2}$ in. Price, per foot.....	1.20

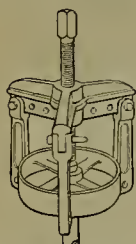
Comes in about 3 foot lengths and we do not cut to shorter sizes.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

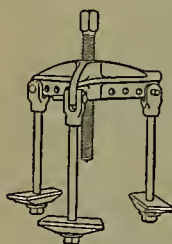
## THE CRANE WHEEL AND GEAR PULLER



Two-arm Puller showing use of comb, hook and extra arms.



Three-arm Puller pulling from three points will remove collars and work that cannot be started with the two-arm pullers.



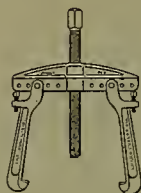
Special attachment for removing heavy spoked fly wheels, pulleys, truck wheels, etc.



Crowfoot Beam.

The most practical device for safety removing fly wheels, auto wheels, gears, cams, sprockets, collars, couplings, commutators, propellers, etc., bending pipe, straightening shaft and removing universal joints.

The screw has a flat end with inserted tempered tool steel point, that will not spread centers. Makes its own center on work that has none. The strain is taken on the flat end of the screw. The screws are made of high carbon steel and case-hardened all over.



Patented

No. 0. Made in two-arm style only. Weight,  $2\frac{1}{2}$  lb. Each, \$2.50.

No. 2. Two arm style. Weight boxed, 16 lb. Each, \$8.00. Three arm style. Weight boxed, 19 lb. Each, \$10.50.

No. 3. Two arm style. Weight boxed, 28 lb. Each, \$10.00. Three arm style. Weight boxed, 39 lb. Each, \$13.00.

No. 2 Locking Arm, 6 inches or 10 inches long, fits No. 2 Puller, two or three arm style. Each, \$1.00.

No. 3 Locking Arm, either 7 in. or 11 in. long, fits No. 3 Puller, two or three arm style. Each, \$1.25.

### EXTRA SIZE NO. 3 BEAMS

No. 3X. Two arms, takes work 16 inches in diameter. Weight,  $13\frac{1}{2}$  lb. Each, \$5.56.

No. 3X. Three arms takes work 28 inches in diameter. Weight 32 lb. Each, \$12.00.

### PIPE BENDING OR SHAFT STRAIGHTENING ATTACHMENT.

Consists of a pair of arms with hooks at right angles to the

No. 2. Weight,  $6\frac{1}{4}$  lb. Each, \$2.75.

No. 3. Weight,  $9\frac{1}{4}$  lb. Each, \$3.50.

### ARBOR PRESS BASE

This attachment bolts to the bench; the puller is fastened to it with two set screws, making an excellent and practical arbor press.

No. 2. Two arm Base takes work 7 inches in diameter. Weight, 18 lb. Each, \$5.50.

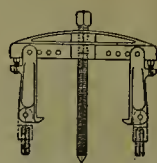
No. 3. Two arm Base takes work  $11\frac{1}{2}$  inches in diameter. Weight, 30 lb. Each, \$7.50.

### CROWFOOT BEAM.

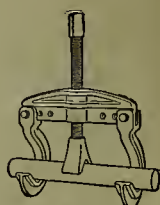
A combination two and three arm beam does the work of both.

No. 2. Weight, 7 lb. Each, \$4.00.

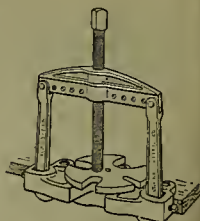
No. 3. Weight, 13 lb. Each, \$5.94.



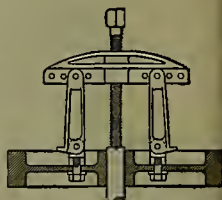
No. 0 Two-Arm Puller. Designed for all kinds of light work. 5 in. in diameter and 3 in. from end of shaft.



Pipe Bending and Shaft Straightening Attachment.



Arbor Press Base. For use with two arm puller only.



Showing use of Stud Forks for removing solid webbed flywheels, gears, etc.

# GUARANTEE

We guarantee the materials and workmanship in these tools, and will replace any defective part without question and absolutely free of charge upon return of defective part to the manufacturer.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## GREB AUTOMATIC GRIP PULLER

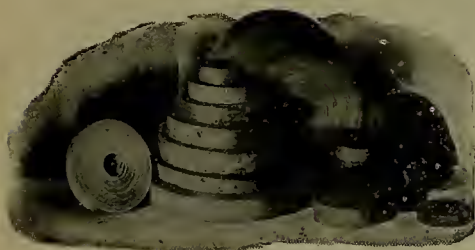
The "One Best Bet" in Wheel and Gear Pullers Combinations of two or three jaws.

Quick, strong, durable, efficient and simple. Positive grip cannot unhook and adjusts to work instantly. Designed for heavy work. A one-man puller with a locking device, capacity 1 to 18 inches. Complete with two sets of arms. 7 inch arms open to 10 inches and 12 inch arms to 18 inches. Screw of hardened steel, 1 inch diameter, 14 inches long.

Price, complete .....\$25.00



## BELTING



FLAT OAK TANNED BELTING

$\frac{3}{4}$ in. ....	ft. \$0.15
$\frac{1}{2}$ in. ....	ft. .18
$\frac{3}{8}$ in. ....	ft. .21
$\frac{1}{4}$ in. ....	ft. .24
$\frac{1}{8}$ in. ....	ft. .30
$\frac{1}{16}$ in. ....	ft. .36



ROUND OAK TANNED BELTING

$\frac{1}{4}$ in. ....	ft. \$0.10
$\frac{3}{8}$ in. ....	ft. .12
$\frac{1}{2}$ in. ....	ft. .18

TANNATE ROUND BELTING

Strongest and best made.

$\frac{1}{4}$ in. ....	ft. \$0.12
$\frac{3}{8}$ in. ....	ft. .15
$\frac{1}{2}$ in. ....	ft. .20

BALATA BELTING

Made from fabric and Balata gum. Impervious to oil.

$\frac{3}{4}$ in. ....	ft. \$0.18
$\frac{1}{2}$ in. ....	ft. .18
$\frac{3}{8}$ in. ....	ft. .23

Made of extra heavy cotton web with a black waterproof treatment. Absolutely impervious to water or oil. Prevents rattle or friction between hood and shroud. Lasts longer than any other lacing made.

$\frac{3}{4}$ in., per 100 ft. ....	\$2.30
$\frac{1}{2}$ in., per 100 ft. ....	2.60
$\frac{3}{8}$ in., per 100 ft. ....	3.00
$\frac{1}{4}$ in., per 100 ft. ....	4.35
$\frac{1}{8}$ in., per 100 ft. ....	5.75

RADIATOR LACING



FLEXO LAMINATED "V" BELTING



Made in sections cut from solid center back belting hides. Oak stock. It is strong, flexible and waterproof and may be readily lengthened or shortened without special tools. Furnished with sufficient rivets and hurr for making them endless.

Size $\frac{3}{4}$ inch, per ft. ....	\$0.70
Size $\frac{1}{2}$ inch, per ft. ....	.80

SOLID "V" BELTING

$\frac{1}{2}$ inch, per foot ....	\$0.40
$\frac{3}{4}$ inch, per ft. ....	.50

CALCUTTS STEEL WIRE BELTING

Wire Belt  
Patent Pending

Hook and Eye Wire Coupling

Packed 50 ft. in a box, with 20 couplings.

$\frac{1}{4}$ inch. Per foot ....	\$0.08
$\frac{3}{8}$ inch. Per foot ....	.09
$\frac{1}{2}$ inch. Per foot ....	.10
Couplings, as shown in above cut. Per dozen.....	.30
No charge for Couplings when ordered in full boxes.	

RAWHIDE BELT LACING



One hundred feet in a bundle.

$\frac{1}{4}$ in. Rawhide laces. Per hundred ft. ....	\$1.50
$\frac{3}{8}$ in. Rawhide laces. Per hundred ft. ....	1.75
$\frac{1}{2}$ in. Rawhide laces. Per hundred ft. ....	2.00

BRISTOL'S PATENT STEEL LACING



READY TO APPLY FINISHED JOINT

No. 0. Price, per 100 inches: Light, $\frac{3}{8}$ to 3-16 inch thick ....	\$1.00
No. 1. Price, per 100 inches: 3-16 to $\frac{1}{4}$ inch thick ....	1.50
Packed 100 inches to a box.	

ROUND BELT HOOKS



No. 14 No. 15 No. 16.	
For $\frac{3}{8}$ , 5-16 and $\frac{1}{4}$ Belting.	
Per 100 ....	\$0.20
FLAT BELT HOOKS	
No. 9 No. 10 No. 11.	
For $\frac{1}{4}$ in. For $\frac{3}{8}$ in. For 1 in.	
Per 100 ....	\$0.30

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## No. 100. Brush Set



Put up on cards of one dozen 1-inch Brushes, very handy for the retail trade. Can be hung on wall or for showcase display.

Price, per card .....\$2.50  
Extra Brushes, loose, per dozen ..... 2.25

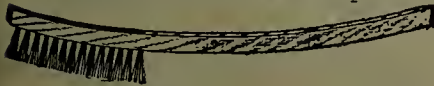
## No. 63. Flat Varnish



For first coat, chiseled edge, flat bound, in tin and cedar handles. Super bristles.

Sizes, inches ..... 1      1½      2  
Each .....\$0.20      \$0.30      \$0.40

## Brazier's Cleaning Brush



Made of three rows round tempered steel wire, 1½ inch long. Wire drawn, wood handle. Can be used for all kinds of cleaning, instead of scraping.

Each .....\$0.50

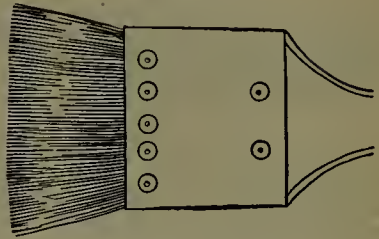
## Roughening Brush



Just the thing to roughen up the parts that want to be prepared before applying cement, so that patch will stick fast.

Price .....\$0.20

## No. 78. Camel's Hair Color



For second and finishing coat, extra thick nailed in brass, short cedar handles.

Sizes, inches ..... 1      1½      2  
Each .....\$0.50      \$0.60      \$1.10

## Spark Plug Brush



A very handy article to clean your spark plugs with. Has strong wire for grease and dirt, steel bristles with which to reach inaccessible parts.

Price, each .....\$0.30

## File Cleaning Cards



Made of fine quality steel wire. Brush part 4½ inches long. Plain wood handle, 8¼ inches long over all.

Each .....\$0.25

## Chain Brushes



Wood handle. Black bristles for cleaning chains or other parts of machine.

No. 1 One row bristles, each .....\$0.15  
No. 2 Two rows bristles, each ..... .18  
No. 3 Three rows bristles, each ..... .25

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## BRUSHES



No. 09 BRUSH

Where brush No. 075 cannot be used, the No. 09 will be found adapted for such work, as its shape will permit of getting in and around engine parts, automobiles, boats, etc. Three row bent handle, block 1 inch wide,  $1\frac{1}{4}$  inches over all. Wires  $1\frac{1}{2}$  inches long.

No. 09. Price, each .....\$0.50



No. 376 SPOKE WASHING BRUSH

The most practical for cleaning and scrubbing purposes; for getting between the spokes of the wheels, close to the hub. Scrubbing side contains one row of fibre  $1\frac{1}{2}$  inches long; washing side, two rows of fibre  $2\frac{1}{4}$  inches long.

No. 376. Price, each .....\$0.90



ENGINE CLEANING BRUSHES

No. 094

These brushes are made of stiff horse hair with a flexible twisted wire handle and are indispensable for cleaning out the feed pipes and other ordinarily inaccessible parts of engines in automobiles, aeroplanes, etc.

No. 094. Price, each .....\$0.20



TAMPICO SWEEPING BRUSH

No. 308

Tampico sweeping brushes are specially adapted for garage use. Made of the best material to withstand hard usage.

14 inches long, each .....\$1.75

No. 309

HORSE HAIR SWEEPING BRUSH

Black horsehair, wire-drawn, specially adapted for use on oiled or fine floors.

14 inches long, each .....\$2.50



No. 116

AUTO  
CLEANING  
BRUSH

This brush is hatchet shaped, made of stiff Russia bristle, securely fastened in a nickel ferrule by hard rubber and is warranted not to shed bristles. Can be used in gasoline or water. An invaluable brush for removing oils, greases and dirt from engines in automobiles, etc. It is an excellent brush for washing and cleaning chassis and remote parts of vehicles that cannot be reached with an ordinary brush.

No. 116. Price, each .....\$1.50



No. 075 BRUSH

Made of fine round tempered steel wire, shoe handle shaped block, 2 by 13 rows, wires  $1\frac{1}{4}$  inches long.

No. 075. Price, each .....\$0.50

ARKACO AUTO CLEANER

Length 28 inches



For washing wheels, especially wire wheels. The large end is round, the bristles being twisted between steel wires. The small oval brush on the other end is vulcanized in rubber, and is intended for cleaning the hubs. It can be used in gasoline. Has a square wooden handle to give a firm grip.

Each .....\$1.75

FITSIT

Length 18 inches



Is just what its name implies. Fits all the various sized triangles formed by the intersection of the spokes in wire wheels. Gets in all the small places about a machine. Gray Russian and black Chinese bristle twisted between two strands of wire. Felt protected end.

Each .....\$1.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## Chamois



DON'T BUY  
CHEAP  
CHAMOIS OR  
SPONGES

## Sponges



Oil tanned, the best quality selected and warranted to wash. Use liberal quantity of soap when washing and they will dry out soft.

Double dressed, extra heavy and finished on both sides; the best is always the cheapest.

12 x 14 inches.....	\$0.60
13 x 17 inches.....	1.00
19 x 25 inches.....	2.25
26 x 28 inches.....	2.60

Price each

We call particular attention to the fact that we are handling nothing but the purest Rock Island Sponges, full formed—the best your money can buy. They are free from grit, sand, or any other ingredient and will positively not scratch cars. They are tough, but soft and will outwear any other sponge on the market. Do not consider your first cost. Buy pure goods, not loaded. It is cheaper in the long run.

Price, each—Medium .....\$1.50

Price each—Medium Large ..... 1.75

Price, each—Large ..... 2.50

Prices subject to market changes.

## Polishing Mittens



It consists of four plies of knit goods, one side of the goods being fleeced. When the outside ply has been worn hard the next ply can be brought into use by turning the mitten inside out.

Per dozen .....\$0.75

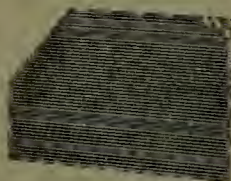
## No. 1 Cotton Waste



We carry only No. 1 selected white thread waste free from grit, dirt and hard lumps.

Per pound .....\$0.25

## Cotton Wipers



Wipers are made of knit cotton cloth. Very soft and will not scratch. Elastic and strong.

Per pound .....\$0.50

## Raw Silk Wipers



These wipers are far superior to all other wipers as they last indefinitely; some of them having been washed sixty times and still not worn out. Used for wiping and polishing on an auto.

Price each

S. M. Quality, 12 in. x 15 in....\$0.15

Special Quality, 15 in. x 15 in.... .25

Special Quality, 30 in. x 30 in.... .50

## Cheese Cloth

By many preferred for polishing. Put up in bolts containing 10 yards.

Price, per bolt .....\$1.50

Remnants, per lb. .... 1.50



## Rubber Boots

Every pair guaranteed water-tight. The only leather soled rubber boot manufactured without the use of nails or screws in the soles. Where nails and screws enter the sole water can follow. The sole of the boot is stitched to the welt around the outside edge of the foot (see cut) so there are no perforations into the sole as is the case with all other leather soled rubber boots.

Will outwear from three to five pair ordinary rubber boots. Soles can be renewed. Iron heels never wear out.

Short style ..... \$9.00

Storm King style ..... 10.00

Hip style ..... 11.75

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## "AUTO DUSTERS"

Soft and flexible and won't scratch. Reinforced cuffs, with metal hase heads, rubberoid handles.

Auto Dusters are made on a block on which the feathers are wound shorter and wider, giving great flexibility and wide dusting surface.

Each

No. 80. 16 inch. 150 Brown Tail feathers...\$2.25

## Chicago Grade

Heavy weight, very soft, 150 tail feathers. For liveries and garages.

No. 45. 14 inch ..... Each \$1.75

## "Hi-Kuff"

120 selected tail feathers, held in place by a high cuff, insuring long wear.

No. X. 14 inch. .... Each \$1.25

## Royal Blue Wool Auto Dusters

The "Royal Blue" duster will out-wear any duster made for automobile dusting. They are well filled with long, strong wool which is held in place by our reinforced cuffs. The head has an unbreakable metal hase and the handles are hardwood with threads that are guaranteed not to strip. The wool is dyed a rich dark blue so that when strands are caught in joints, crevices, etc., they do not show on the car as the bright red and orange strands on the ordinary wool duster do. Can be washed.

No. B. Wool, 9 in. long. Price, each.....\$2.25

No. D. Wool, 11 in. long. Price, each..... 2.50

## Perfection Wool Dusters

Wool dusters are very soft and will not scratch. Can be washed when dirty. "Perfection" dusters are guaranteed full length.

No. 4. 9 inches. Price, each.....\$1.50

No. 8. 11 inches. Price, each..... 2.00



No. 80



No. 45

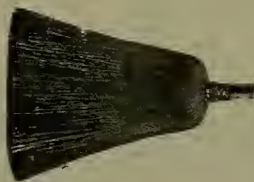


Nos. B-D



Nos. 4-8

## Whisk



A useful article around a garage. Made from the finest selected Illinois Broom Corn, thoroughly combed and free from seed. Natural color; four rows of stitchings, fully wired to handle with plush top.

Size

14 inch .....\$0.75

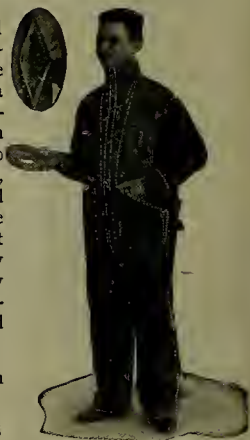
8 inch ..... .50

## Coverall Suits

These suits will keep the clothes entirely clean while working around a motorcycle or automobile, made all in one piece, easy to take off and put on, comfortable and practical. Made from medium weight tan khaki. Closely woven, absolutely oil, dust and grease-proof. Strong and washable.

No. 106. Medium weight, tan color.

Price, suit ....\$4.25



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## Overhead Vehicle Washer



Is built for service. Reaches vehicle from all sides. No heavy hose to drag. No vehicle to move. It saves time, labor and water bills. Keeps the hose off the floor and drains both ways, therefore the hose keeps dry and prolongs wear. No kinks and no breaking. Made from the best material, having truss rod which makes the washer indestructible. Complete with lag screws for attaching to the ceiling.

Price, each .....\$10.00

## "Cataract" Washer



This washer consists of a brass tube with a perforated brass bulb on the end and a soft cotton mop attached through which the water pours, keeping it clean.

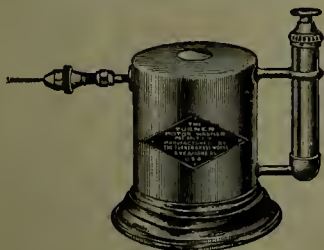
Can be had with or without stop cock in handle to turn water off or on.

Price, each, with stop cock.....\$2.25

Price, each, without stop cock..... 1.75

Price, extra mops, each..... .65

## Turner Motor Washer



Indispensable to the auto owner or the garage repair man. All grease, grime and dirt can be instantly removed from all otherwise inaccessible parts of the motor and other mechanism. No grease or oil cup should ever be removed and opened for filling without first being cleaned with this washer.

Price, each .....\$5.25

## Wash Aprons

Made of Rubber Cloth of good quality and a necessity in every garage.

Price, each .....\$2.25

Made of heavy brown canvas.

Price, each .....\$1.00

## The "Ideal" Washer



Machine is equipped with a solid rubber cup or head. The hooks engaging the sponge are located below the edge of the rubber cup, making it impossible to scratch or mar the finest finish.

The inside of cup is brass lined, as are also the holes through which the wire passes, making the wearing surface solid brass throughout. The sponge is compressed by means of a strong coil spring, which is quick and positive in its action, making the most desirable washer ever invented.

Price, without sponge, each .....\$2.25

## Automatic Water Saver



(3/4-inch Size)

When the operator drops the hose it shuts off the water instantly. NO MORE WASTE OF WATER. Fits any 1/2 or 3/4 hose. Made of brass. Is adjustable for relief on old hose. Worth many times its cost to GARAGEMEN, LIVERYMEN, FACTORIES, or any place where hose is used.

The only man who turns off the water is the man who pays the bills. This will do it for him.

Price .....\$2.50

Extra Spray Nozzles to fit Water Saver, each.... .25

## Bink's Automatic Cleaner

With this outfit the parts of the car can be quickly cleaned of grease, dirt, etc., without using wiping rags or waste.

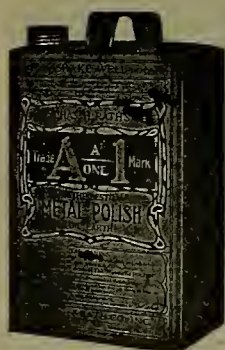
To operate the outfit, fill with about two gallons of gasoline and pump in thirty or forty strokes of air. The spray will cut the grease and dirt immediately from all affected parts.

Price complete as illustrated, three feet of discharge hose, shut off cock and nozzle, and carrying strap .....\$7.50



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## A-1 Metal Polish



Rightly named—the quality fixed. Tests and experiments have proven that it is the "best metal-polish" on earth.

A metal polish that has become the standard, filling every want of the metal polish user.

A perfect cream emulsion which produces a high dazzling and lasting lustre; quick in its action; economical, and positively will not cake or harden at the bottom of the can.

Each

One pint cans .....	\$0.25
Quart cans .....	.50
Half-gallon cans .....	.75
One-gallon cans .....	1.25
One-gallon cans, black.....	1.25

## A-1 Hand Soap



## The Modern, Scientific, Antiseptic Cleanser

for the hands. Has a most magical effect upon all kinds of dirt, machine grease, paint, printers' ink, stains, etc.

It contains nothing harmful, is well adapted for hand washing by all whose work soils the hands.

It is far superior to any soap for this purpose.

It leaves the skin soft and white.

It will not injure the most delicate skin.

Can, each .....

## Liquid Veneer



For cleaning and polishing automobiles and carriages. Besides restoring all the elasticity and finish of the varnish, it will bring out any lines of gilding or decoration, no matter how faint or discolored they may have become.

12 oz. bottles .....	\$0.50
Quart cans .....	1.00
Gallon cans .....	3.00

## Pontoklene



Tar is the most deadly enemy to the finish of your car. Drive for a short distance on a tar covered road and the body and wheels will be covered with tar, which is the hardest thing in the world to remove.

Pontoklene overcomes this. Created especially for the purpose. It removes tar as easily as water removes mud. Carry a can with you when touring.

One quart cans, each.....	\$1.00
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## Puritan Oil Soap

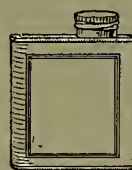


Made of pure vegetable oils. Absolutely will not injure but improves the finest varnished surface. Retains the high lustre of new varnish. Unequalled for automobiles, carriages, highly polished woodwork.

5 lb. pails, each.....	\$1.00
10 lb. pails, each.....	2.00
25 lb. pails, each.....	3.00
50 lb. pails, each.....	6.00
Kegs, 145 lbs., per lb.....	.12
Half-bbls., 280 lbs., per lb....	.11
Bbl., 480 lbs., per lb.....	.10

## NEATSFOOT OIL

Especially adapted for reviving leather clutches, leather seats and tops. Saves the necessity of taking apart clutches, as the leather easily absorbs it, giving new life and new power to clutch.



Pints, each .....	\$0.50
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## Tasgon

**TASGON**  
DID IT!



CAN'T BUDGE IT!



APPLY A FEW DROPS

**TASGON**  
MONEY BACK  
IF IT DOES NOT  
DO THE WORK



AND THERE YOU ARE!

A few drops of Tasgon will instantly dissolve rust and loosen the rustiest nuts and bolts on mud guards, spring clips, radiator, manifold, body, sticky spark plugs, demountable rims, etc.

Particularly valuable as a time saver around repair shops.

Half-pints, each .....	\$0.60
Pints .....	1.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

**Johnson's Black-Lac**

For pantasote and mohair tops, leather cushions of all kinds, tire covers, auto trunks and for touching up worn, rusty metal parts. Gives a rich, black surface just like new. One coat covers. Dries in fifteen minutes, ready for use.

Half-pints .....	\$0.65
Pints .....	1.00
Quarts .....	1.75

**Radiator Cement**

Johnson's Radiator Cement stops ordinary leaks in from two to ten minutes. Simply pour in your radiator. Will not harm the cooling system.

Half-pints .....	\$0.65
Pints .....	1.00
Quarts .....	1.75

**Stop Squeak Oil**

Johnson's Stop Squeak Oil penetrates between the spring leaves, thoroughly lubricating them. Unexcelled for body squeaks, etc.

Apply with a brush.

Half-pints .....	\$0.35
Pints .....	.50
Quarts .....	.85

**Johnson's Prepared Wax**

(Paste or Liquid)

**A Dust Proof Auto Polish**

Johnson's Prepared Wax imparts a hard, dry, glass-like polish which does not collect or hold the dust. It preserves the varnish and protects it from the weather, adding years to its life and beauty. It covers up mars and small surface scratches—removes road oil—prevents checking and cracking—sheds water—and prolongs the life of a "wash."

**Johnson's Prepared Wax**

(Paste)

Auto Size (5 oz.)..\$0.35

**Is Your Car Dirty, Grimy and Unsightly?**

You, yourself, can make it look almost like new and save the cost of re-varnishing—all you need is Johnson's Cleaner and Johnson's Prepared Wax—Liquid or Paste.

**Johnson's Prepared Wax**

(Liquid)

Half-pints .....	\$0.50
Pints .....	.75
Quarts .....	1.40

**Johnson's Cleaner**

Contains no grit or acid and will not scratch or injure the finest polish.

Simply cleans and prepares it for polishing.

**Removes Scum, Road Oil, Grease, etc.**

No matter what kind of body polish you use, you will never get good results unless the surface upon which you apply it is clean. For cleaning the body, hood and fenders of automobiles, preparatory to polishing, there is nothing equal to Johnson's Cleaner.

Johnson's Cleaner really cleans. It removes spots, stains, tar, alkali, etc. Even those spots that are ground in—mud freckles—and surface scratches you thought were permanent—will disappear like magic under Johnson's Cleaner.

Auto size (8 oz.) .....	\$0.35
1 pound size .....	.50

**Johnson's Carbon Remover**

This product has met with unqualified success everywhere. It is guaranteed by the manufacturers both as to article and sale, so neither dealers nor users take the slightest risk. It is a liquid preparation very easy to use. Simply pour an ounce into each cylinder at night through the petcocks or spark plug openings, and in the morning drive off with a perfectly clean, sweet engine. The pulverized carbon blows out of the exhaust as your car is operated.



Johnson's Carbon Remover is not only the cheapest, easiest and most effective means of removing carbon, but will pay for itself over and over in the saving of gasoline and oil effected by the reduction of friction.

Should be used every thousand miles.

Quarts .....	\$1.75
Pints .....	1.00
Half-pints .....	.65

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.





UTILITY BLACK is a one coat air drying enamel made specially for use on lamps, radiators, bumpers and all metal work about an automobile. Hard Rubber finish. It dries over night, giving an elastic heat resisting finish that will not chip or crack.

Price, each, 1 pint cans.....\$1.00  
Price, each ½ pint cans..... .60



ALUMINUM BRONZE is put up specially for use on radiators, engines, mufflers, etc. Because of its heat resisting qualities it is particularly well adapted to painting those parts of the machine that are subject to heat. One can will do over the largest size motor. One-half pint cans.

Price, per can .....\$0.75



NEVER-BURN engine enamel is specially prepared for use on automobile engines. The heat of the engine bakes the enamel and produces a finish that will not crack or burn off. Never-Burn is made in two finishes, namely, Gloss Black and Battleship Gray. Pint cans.

Price, each, per can.....\$0.85



COLOR VARNISHES are made specially for one coat work. Dry over night and give a most brilliant finish. Comes in the following colors: Green, blue, gray, red, tan, orange, black and clear.

We stock Blue, Gray, Red and Black.

Pints, each .....\$1.00  
Quarts, each ..... 1.85



CLUTCH AND BRAKE COMPOUND restores leather, cork or composition clutch and brake facings to their original state, causing them to grip with their original tenacity. This is undoubtedly the best clutch and brake compound on the market. It is prepared on scientific principles and gives absolute satisfaction wherever used. Pint cans.

Price, per can .....\$0.60



TOP DRESSING imparts a soft, flat, black appearance to leather and Pantasote. It has the appearance of satin and is, we believe, far superior to the shiny varnishes now used as top dressings. This dressing produces an absolutely waterproof and elastic finish. Each can contains enough dressing to cover the largest size top.

Pints, each ..... .75  
Quarts, each .....\$1.25



RIM AND GASKET SHELLAC is used to cement bicycle tires to their rims, also to coat gaskets so that a perfectly tight union may be made. It does the trick. Half-pint cans.

Price, each .....\$0.50



#### MECHANICS BLUE

Made from the finest quality American blue, ground in pure linseed oil. Used by all mechanics to show wear and high spots.

Price, each .....\$0.20



#### SPECIAL MOHAIR DRESSING

A water-proof dressing for auto tops. Made especially for use on Mohair. Both dyes and water-proofs with one application.

Pint cans .....\$0.75  
Quart cans ..... 1.25

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.





*ACME QUALITY*

# Motor Car Finishes

Right now is the time to put in a complete line of materials for refinishing automobiles.

Thousands of auto owners who have been in the habit of buying new models every year, are refinishing their old cars. In every community there are scores of auto owners who are in the market for a reliable finish.

The dealer who is able to offer a reliable line of trade-marked finishes, backed by a paint manufacturer who is well known through national advertising, will be able to make his "Auto Refinishing Department" one of the most profitable departments in his business.

Acme Quality Motor Car Finish is a profitable line for the dealer. They are quick sellers and only a small investment is required which will enable the dealer to offer his customers all of the standard popular colors.

Acme Quality Motor Car Finishes are made of materials selected especially for automobile work. They are suitable for use either by the professional or by the car owner, and if carefully applied in accordance with our simple instructions, will insure a finish which in beauty and durability is fully equal to a factory job.

A liberal supply of store advertising is furnished, consisting of such articles as celluloid display signs showing colors; color sample cards, instruction sheets, etc.



**P**REPARED especially for refinishing automobiles. They are offered to the automobile owner as a practical solution of the repainting problem. All operations have been simplified and the automobile owner can procure an excellent finish with little time and expense.

Acme Quality Motor Car Finishes are carefully prepared from the best materials and will produce a beautiful and durable finish.

Furnished in the following popular colors: Auto Green, Auto Red, Auto Brown, Auto Blue, Auto Gray, Auto Sport Green, Auto Black, Auto Wheel White, Auto Wheel Cream, Auto Undercoating (for priming coat) and Auto Clear Finishing (a clear varnish).

List Prices per Package

	Qts.	Pts.	1/2-pt.		Qts.	Pts.	1/2-pt.
Auto Black .....	\$1.50	\$0.85	\$0.50	Auto Clear Finishing..	\$1.80	\$1.00	\$0.60
Auto Green .....	1.80	1.00	.60	Auto Sport Green...	1.80	1.00	.60
Auto Blue .....	1.80	1.00	.60	Auto Wheel White...	2.20	1.20	.70
Auto Brown.....	1.80	1.00	.60	Auto Wheel Cream...	2.20	1.20	.70
Auto Gray.....	1.80	1.00	.60	Auto Red .....	2.20	1.20	.70
				Auto Undercoating..	1.50	.85	.50



**F**OR enameling automobile hoods and fenders. Produces a beautiful and lasting black finish. Also recommended to be used on horns, brackets, springs and spring-clips, dust shields and like surfaces. It is indispensable to repair men for enameling and retouching auto parts where the finish has been damaged or destroyed.

List Prices per Package

Qts.	Pts.	1/2-pt.
\$1.25	\$0.75	\$0.45



**F**OR protecting and waterproofing mohair automobile tops. May also be used on leather or rubber tops.

This Dressing is unaffected by rain or washing. It does not cause the fabric to crack, split or wrinkle; neither will it cause the fabric to stick together when folded down. On the ordinary mohair top one coat is sufficient to produce a handsome black waterproof finish.

List Prices per Package

Qts.	Pts.	1/2-pt.
\$1.25	\$0.75	\$0.45

## MARVEL MIST



It is a product prepared by one of the leading chemists affiliated with the automobile body cleansing and polishing industry.

It is non-inflammable, non-combustible, and contains no acids or alkali to injure the varnished surface.

It cleanses and polishes Auto Bodies, Fenders, Hoods, Windshields, Leather Upholstery, Furniture, Floors, Marble, Tile, and in fact any surface with a polished or varnished finish.

It will not only cleanse and polish the surface, but will leave a dry film, which will protect it from any injurious substances, such as the accumulation of mud and rain spots and streaks. It will remove tar, road-oil, grease, and prevent corrosion of metals.

Used on the windshield, it will shed rain, snow and mist, and will prevent steaming.

Economy of cost: Its method of application by means of the Combination Sprayer abso-

lutely eliminates all waste, and a pint of the liquid will suffice for 25 applications on a large touring car.

Economy of time and labor: Marvel Mist comes to you in the container of the Sprayer, all packed in a box with cheese cloth, ready for instant use. Fifteen minutes is all that is required to clean a large touring car. Simply spray on the liquid, and wipe dry with the cheese cloth to obtain a gloss that will rival factory finish.

Each	
Midget Outfit, with cloth .....	\$1.00
Giant Outfit, with cloth .....	1.25
Pint Can for refilling .....	.75
Quart Can, for refilling .....	1.00
Gallon Can, for refilling .....	2.75
Special Gallon, Compressed Air Garage	
Outfit .....	3.00
Five-Gallon Garage Refilling Outfit.....	12.50

## Electric Horn Connector



The wire is firmly held and cannot jar loose. No stripped portions of wire exposed. Dirt and moisture cannot cause trouble. Wire cannot break off by wearing through from vibration, as when held by hexagon nuts. It is the standard connector for Klaxon horns.

Price, each .....

Price, each .....

## NOXAL AUTO POLISH

Knocks all grease, tar, wax coatings and any other foreign accumulation and at the same time cleans and polishes the enameled or varnished surfaces. Restores the original finish. Contains no gum, grease or wax to coat over the varnished or enameled surfaces.

1/2 pints .....	\$0.50
Pints .....	1.00
Quarts .....	1.50

## Auto Safety Drip Pan



Made of heavy galvanized steel with iron rim turned over a heavy rod leaving top surface of pan without seam or solder, heavy edge banded with red stripe.

Price, each	
No. 1. Runabout, size, 35x47	
in. ....	\$6.50
No. 2 Touring car, 35x95 in.	12.00

New sizes, not quite so heavy, not striped, but a good, serviceable pan.

Price, each	
No. 01. Runabout, size 29x41	
in. ....	\$4.75
No. 02. Touring car, size 29x	
8 1/2 in. ....	9.00



## Testing Tank



Made of heavy steel, double seamed construction, galvanized after it is made. Clamp and set screws are brass, the rod supports the tube allowing free use of both hands, the rod is adjustable to different size tire tubes.

No. 1. Size 30x6x8 in. deep.	
Price, each .....	\$3.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## FUNNELS

These Funnels are especially designed for filling auto gasoline tanks and barrels. They have large fluted tubes so that the gasoline will run through fast and not become air bound.



No. 23



Nos. 10, 20, 40, 80



Nos. 4000 8000

The above funnels have movable hoops around top for holding the chamois. No. 23 has a detachable spout as shown by illustration, Nos. 4000 and 8000, the spout can be quickly removed, and a good, regular funnel remains.

No. 23, size of top $10\frac{1}{2} \times 5$ in.; length of spout $4\frac{1}{2}$ in.; outlet, $\frac{5}{8}$ in., coppered.	Each	\$1.75
No. 10, 1 qt., 5 in. diam. top $\times 6\frac{3}{4}$ in. high, outlet $\frac{1}{2}$ in., coppered.	Each	1.00
No. 20, 2 qt., $8\frac{3}{8}$ in. diam. top $\times 9\frac{1}{2}$ in. high, outlet $\frac{3}{4}$ in., coppered.	Each	1.25
No. 40, 4 qt., $9\frac{3}{4}$ in. diam. top $\times 11$ in. high, outlet $\frac{1}{2}$ in., coppered.	Each	1.75
No. 80, 8 qt., 12 in. diam. top $\times 12\frac{1}{2}$ in. high, outlet $\frac{3}{4}$ in., coppered.	Each	2.00
No. 4000, 4 qt., $9\frac{3}{4}$ in. diam. top, diam. of outlet $\frac{1}{4}$ , coppered.	Each	3.50
No. 8000, 8 qt., 12 in. diam. top, diam. of outlet $\frac{1}{4}$ , coppered.	Each	4.00



Nos. 001, 2

Oval in shape, square top pattern, with fine brass strainers, heavily copper plated.

No. 001, 1 pt. size,  $5\frac{1}{4} \times 2\frac{1}{4} \times 6\frac{1}{2}$  in. with  $\frac{1}{2}$  in. outlet. Price \$0.90

No. 2, 1 qt. size,  $7\frac{1}{4} \times 3\frac{1}{4} \times 8\frac{3}{4}$  in. with  $\frac{5}{8}$  in. outlet. Price 1.10



No. 120 SHUT-OFF FUNNEL



Nos. 240, 280

Designed especially for cars with large tank openings. Lower part of body has heads to prevent them from becoming air bound. Copper plated.

No. 240, 4 qt. $9\frac{3}{4}$ in. diam. top $\times 12$ in. high with a 2 in. outlet.	Price, each	\$1.75
No. 280, 8 qt. 12 in. diam. top $\times 13\frac{1}{4}$ in. high with a 2 in. outlet.	Price, each	2.80

No. 120. Funnel. Has automatic indestructible ball valve shut-off. When lifting the funnel from hole in the tank or can, the flow of gasoline stops immediately, which is a necessity to safety and economy.

No. 120, 2 qt. diam. top $8\frac{3}{4}$ in., height $9\frac{1}{2}$ in. with $\frac{3}{4}$ in. outlet	\$2.25
No. 140, 4 qt. diam. top $9\frac{3}{4}$ in., height 11 in. with $\frac{3}{4}$ in. outlet	2.50
No. 180, 8 qt. diam. top 12 in., height $12\frac{1}{2}$ in. with $\frac{3}{4}$ in. outlet	3.00



No. 55 GARAGE FUNNEL

Made of galvanized iron, fitted with a reinforced too-mesh brass wire cloth, cone shaped strainer, giving a larger straining surface. Spout and strainer removable to prevent breaking when shipping.

No. 55, 10 qt. height  $10\frac{1}{2}$  in. diam.  $10\frac{3}{4}$  in. with  $1\frac{1}{4}$  in. outlet. Price, each .....\$2.75

## COMBINATION MEASURE AND FUNNEL



## TIN POLISHED

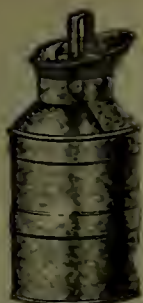
Best material handle on back.

1 pt. tin, each	\$0.50
1 qt. tin, each	.75
2 qt. tin, each	.90
4 qt. tin, each	1.35

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## MEASURES



No. 300 POURING MEASURE

An accurate wagon measure made of a very heavy steel, and galvanized after it is made. Body and bottom are heavily reinforced. Accurate to measure and guaranteed not to leak. Capacity 5 gal., diam. 10½ in., height 19 in., diam. of opening in neck 6 in. No. 300. Price, each, .....\$8.95



No. 15 GARAGE MEASURE

An ideal garage measure made from extra heavy galvanized iron, with blue stripes. Guaranteed not to leak. Holds 5 gallons, diam. 10½ in., height 17 in., opening at top 4½ in., end of spout 1½ in. No. 15. Price, each .....\$2.95



No. 25 EVAPORATING MEASURE

A perfect non-evaporating garage measure made of heavy galvanized iron, with blue hands. Top fitted with a cover plug, so that when the pouring lip is shut off, the gasoline left in can will not evaporate. Capacity 5 gallon, Diam. 11½ in., height 18 in., over all, Diam. of top opening 4 in.

No. 25. Price each .....\$5.00



No. 05 to No. 040

Combination measure and funnels, which are of correct capacity Copper plated.

		Diam. Bot.	Total Height	Diam. Spout	Price Each
No. 05	1 pt.	3½ in.	6 in.	5-16 in.	\$0.80
No. 010	1 qt.	4 in.	8 in.	5-16 in.	1.00
No. 020	2 qt.	5 in.	10½ in.	1½ in.	1.35
No. 040	4 qt.	6½ in.	12½ in.	1½ in.	1.75
Heavily copper plated with funnel and lip for oil or gasoline.					
		Diam. Bot.	Total Height	Diam. Spout	Price Each
No. 5	1 pt.	3½ in.	5¾ in.	5-16 in.	\$0.95
No. 10	1 qt.	4½ in.	7¾ in.	7-16 in.	1.25
No. 20	2 qt.	5½ in.	9¾ in.	1½ in.	1.75
No. 40	4 qt.	6½ in.	12¾ in.	1½ in.	2.25



No. 5 to 40



No. 210 AUTOMATIC SHUT-OFF ATTACHMENT

A most practical measure, combined with a funnel for convenience in pouring, but has in the spout a brass ball valve, (ground oil tight), to shut off the flow of the oil instantly. Heavily copper plated.

Each

No. 210.	1 qt., 4¾ in., diam. bottom; 7¾ in., total height: 7-16 in., diam. spout	.....\$2.00
No. 220.	2 qt., 5¾ in., diam. bottom; 9¾ in., total height: 1½ in., diam. spout	.....2.50
No. 240.	4 qt., 6½ in., diam. bottom; 12¾ in., total height: 11-16 in., diam. spout	.....3.00



No. 52 OIL CAN

Extra heavy weight, galvanized, with blue stripes.

No. 05. 5 gal., diam. 11½ in., height 19 in., price, each .....\$1.70



No. 118 and 222

Measures which have funnel attachments with large spout on one side, and on opposite a large lip for fast pouring. Reinforced bottoms and handles heavily copper plated.

Each

No. 118.	2 gal., diam. bot. 9¾ in., height 14 in., price	...\$6.00
No. 222.	5 gal., diam. bot. 12½ in., height 19 in., price	7.25



No. 18 and 22

These gasoline measures are extra heavy weight with reinforced bottoms. Made from heavy tinned steel, heavily copper plated and lacquered, with a special pouring lip.

Each

No. 18.	2 gal., diam. bot. 9¾ in., height 9¾ in., price	...\$6.00
No. 22.	5 gal., diam. bot. 12½ in., height 12½ in., price	.. 6.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

**Copper Plated****MEASURES****Tin Polished**

Well made. Will not leak. Plain.

	Each	
1 pt. No. 9	.....	\$0.90
1-qt. No. 11	.....	1.00
2-qt. No. 12	.....	1.35
4-qt. No. 14	.....	1.65

**Measures**

No. 5

An extra heavy measure with swinging bail. Nose on lip. Galvanized. Capacity 5 gal. Price, each .....\$4.95

**Soap Economizer**

A perfect pail for washing. It reduces the consumption of soap one-third, made of steel, galvanized after they are made up.

No. 40. Individual size, 13 qts. Diam. 10 in., height 10½ in. Price .....\$2.50

**Nesco Oil Tank**

The Nesco Oil Tank has no equal. The body and bottoms are strongly corrugated. Detachable steady stream pump to use in pumping oil from barrel to tank.

Tank complete including 1 pint, 1 quart, 2 quart tin measures and 1 quart tin funnel.

Capacity, 60 gallons .....\$15.00

Oily waste cans are the only safe receptacle for city waste and a positive safeguard against spontaneous combustion, approved by all fire insurance underwriters.

No.	Diam.	Height	Each
1.	12 in.	15 in.	\$3.05
2.	13½ in.	17½ in.	4.65
3.	15 in.	24½ in.	6.35
4.	17½ in.	27½ in.	7.70

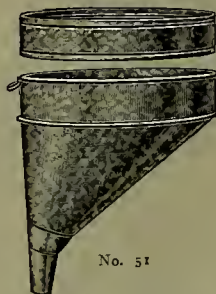


1-pt. ....	\$0.50
1-qt. ....	.75
2-qt. ....	1.10
4-qt. ....	1.30

**Round Tin Funnels**

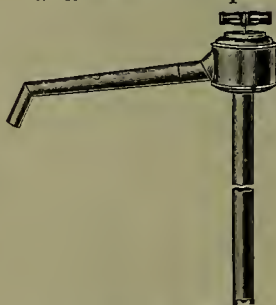
Well made and of best quality tin.

1 Pint, each	.....\$0.25
1 Quart, each	......35
2 Quart, each	......50

**Truck Funnels**

No. 51

This special shape admits of using in corner and where filling hole is near back of seat. 12½ in. diameter. Brass wire strainer. Price, each .....\$3.00

**Gasoline and Transfer Pumps**

These pumps are made of extra heavy tin, thoroughly made with brass valves and are used for pumping oil or gasoline out of a barrel or tank. A very handy article. No. 5. 1½x42 in. Price.....\$3.50



No. 53

Extra heavy steel to stand hard service. Spouts are seamed to body, making it impossible to break them off. Galvanized. No. 53. Each .....\$2.75

**Galvanized Pail**

Made of heavy galvanized iron. Capacity, 14 qts. Diam. 12 in. Height, 10½ in. No. 14. Price, each.....\$0.75

**Oily Waste Cans**

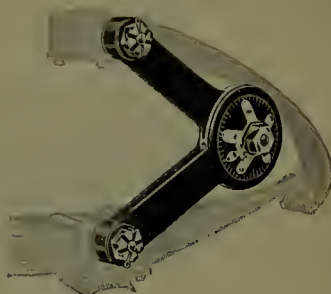
ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# ★ *Hartford*

## SHOCK ABSORBER

New Improved Automatic Model

"THE PIONEER AND THE BEST"



"MAKES EVERY ROAD A BOULEVARD"

Carry your own good roads with you! With Hartford Shock Absorbers on your car you don't have to worry about the kind of road ahead. When the jolts and jars come, Hartford Shock Absorbers just gather them in, rob them of their ability to cause discomfort to passengers and injury to car, and then pass on to the springs just the pressure that the springs can carry nicely! While you, up above, ride as comfortably on one kind of road as another! More than 375,000 motorists are enjoying much more comfortable motoring than you are, much more security from breaking springs than you are, and they are getting much more mileage from their tires, just because they are using Hartford Shock Absorbers. Why don't you?

### COMPLETE FITTINGS

Each set of the six models is complete and ready to apply. It includes the special fittings and the necessary bolts, nuts, spring washers, etc., and a detailed blue print showing the method of application. When ordering, please give the make, model and year of your car.

### PRICES

Heavy Car Types for cars over 4000 lbs. Three-degree Automatic, per set of four.....	\$63.50
Heavy Car Special, per set of four .....	63.50
Average Car Type for cars from 3000 to 4000 lbs., per set of four .....	53.00
Medium Car Type for cars from 2000 to 3000 lbs., per set of four .....	42.50
Light Car Type, for cars up to 2000 lbs., per set of four .....	32.00
Ford Set of three, one front and two rear .....	24.00

### Auto Creeper



No. 112 WITHOUT TRAY



No. 113 WITH TRAY

Something needed by every automobilist. Used for crawling under the car. Saves its cost in a short time by keeping the clothes clean. Made with heavy oak crosspieces and hardwood slats, roller bearing casters and waterproof headpiece.

No. 112. Creeper, without tool tray, each.....	\$2.00
No. 113. Creeper, with tool tray, each.....	2.25

### Vehicle Caster



The best, simplest, lightest, smallest and most satisfactory device for handling automobiles, trucks, etc. Frame one solid piece of malleable iron, ball bearing casters, permitting the auto to be turned or moved very easily in any direction.

Size, 14x26½ for heavy or light cars.

No. 2 Caster, malleable iron. Price, each.....\$8.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



# "WHITNEY" CHAINS



Made by specialists, in a shop especially equipped for the making with years of experience to back them; made from material chosen for quality, regardless of cost, and all care taken in the manufacture, makes "Whitney" Chains stand foremost.

They are favorably known from the Atlantic to the Pacific by jobbers, dealers and users.

## Prices either Detachable or Riveted



Connecting Link



Assembled Center Block



Offset Link

Pitch	Diam. of Roll	Width of Roll	Chain Number	Chain per Foot	Assembled Center Block	Connecting Link	Offset Link	Special Bronze Cotter Pins per 100
$\frac{5}{8}$ "	.400	$\frac{1}{4}$	145					
$\frac{3}{4}$ "	$\frac{5}{16}$ w $\frac{3}{8}$ w $\frac{1}{2}$ w $\frac{5}{8}$ w	$\frac{5}{16}$ $\frac{3}{8}$ $\frac{1}{2}$ $\frac{5}{8}$	101 102 & 202 103 & 203 104 & 204					
1"	$\frac{5}{16}$ w $\frac{3}{8}$ w $\frac{1}{2}$ w $\frac{5}{8}$ w $\frac{3}{4}$ w $\frac{1}{2}$ w $\frac{1}{2}$ w $\frac{1}{2}$ w	$\frac{3}{8}$ $\frac{1}{2}$ $\frac{5}{8}$ $\frac{3}{4}$ $\frac{3}{8}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{5}{8}$	5 6 & 206 7 & 207 208 105 106 & 406 69* & 469*					
$1\frac{1}{8}$ "	$\frac{1}{2}$ w $\frac{3}{4}$ w	$\frac{5}{8}$ $\frac{3}{4}$	94*					
$1\frac{1}{4}$ "	$\frac{3}{4}$ w $\frac{1}{2}$ w $\frac{3}{4}$ w $\frac{1}{2}$ w $\frac{3}{4}$ w $\frac{1}{2}$ w $\frac{1}{2}$ w	$\frac{1}{2}$ $\frac{5}{8}$ $\frac{3}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ $\frac{1}{2}$ $\frac{5}{8}$	10 11 Sp 11 & 211 12 & 212 70 & 470 71 & 471					
$1\frac{1}{2}$ "	$\frac{7}{8}$ w $\frac{1}{2}$ w $\frac{3}{4}$ w $\frac{1}{2}$ w $\frac{3}{4}$ w $\frac{1}{2}$ w	$\frac{5}{8}$ $\frac{3}{4}$ 1 $\frac{5}{8}$ $\frac{3}{4}$ $\frac{3}{4}$	15 16 & 216 17 & 217 75 76					
$1\frac{3}{4}$ "	1 w	1	20 & 220					
2"	$1\frac{1}{8}$ w	$1\frac{1}{4}$	30 & 230					

On account of prevailing market conditions all chains are sold subject to market price on day of shipment.

w—Roll Diameters marked "w" are "Whitney" Standards.

\*—Chains marked \* are of the "Bushing" type (without Rolls).

"Whitney" Chains are furnished with regular side plates for ordinary service or with deeper side plates for extra severe duty. These are numbered in 200 and 400 sizes while all other numbers are of the regular side plate type. Both chains will run on the same sprocket but care must be taken that sprocket hubs, etc. do not come in contact with the edges of the deeper side plates.

No. 145  
ROLLER  
CHAIN



Pitch  $\frac{5}{8}$  Inch  
for  
Motorcycles

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



# Baldwin Roller Chains

## Cotter Pin



## Motorcycle



Riveted Type only.

Chain Number	Price	Pitch	Diam. of Roll	Width of Roll	Gauge
*111	.65	1/2"	.306"	3/16"	.060"
*112	.65	1/2"	.306"	1/8"	.060"
*113	.65	1/2"	.306"	1/4"	.060"
*114	.90	1/2"	.335"	1/4"	.060"
7A	.94	3/4"	.152"	5/16"	.083"
75	.94	3/4"	.152"	5/16"	.100"
85B	.99	3/4"	.152"	3/8"	.083"
8	.99	3/4"	.152"	3/8"	.100"
9	1.04	3/4"	.152"	3/8"	.100"
76	1.04	3/4"	.152"	1/2"	.083"
95	1.13	3/4"	.152"	5/8"	.125"
46	1.25	1"	9/16"	1/2"	.125"
60	1.25	1"	9/16"	1/2"	.156"
11	1.25	1"	9/16"	3/8"	.125"
12	1.41	1"	5/8"	3/8"	.125"
13	1.25	1"	9/16"	1/2"	.125"
14	1.41	1"	5/8"	1/2"	.125"
45	1.41	1"	5/8"	3/8"	.156"
37	1.36	1"	9/16"	3/8"	.125"
37 1/2	1.36	1"	9/16"	5/8"	.156"
15	1.49	1"	5/8"	5/8"	.125"
27	1.49	1"	5/8"	5/8"	.156"
35	1.68	1 1/4"	7/8"	3/4"	.125"
36	1.51	1 1/4"	5/8"	3/8"	.156"
18	1.85	1 1/4"	3/4"	5/8"	.156"
42	1.85	1 1/4"	3/4"	5/8"	.156"
19	2.00	1 1/4"	3/4"	3/4"	.156"
43	2.00	1 1/4"	3/4"	3/4"	.156"
58	1.85	1 1/4"	3/4"	5/8"	.187"
38	2.00	1 1/4"	3/4"	3/4"	.187"
62	2.03	1 1/2"	3/4"	3/4"	.187"
22	2.55	1 1/2"	7/8"	3/4"	.187"
30	2.74	1 1/2"	7/8"	1"	.187"
51	2.74	1 1/2"	7/8"	1"	.220"
56	3.05	1 3/4"	1"	3/4"	.187"
23	3.05	1 3/4"	1"	1"	.187"
52	3.05	1 3/4"	1"	1"	.220"
47	3.68	2"	1 1/8"	3/8"	.218"
33	3.68	2"	1 1/8"	1 1/4"	.218"
53	3.68	2"	1 1/8"	1 1/4"	.250"

Chain Number	Price	Pitch	Diam. of Roll	Width of Roll	Gauge
110	.75	3/8"	.40"	1/4"	.065"
*109	.75	3/8"	.40"	1/4"	.075"/.085"
*108	.80	3/8"	.40"	3/8"	.075"/.085"

\*Numbers 108 and 109 New 1915 Heavy Types.



Assembled  
Roller Link



Cotter Pin  
Connecting Link



Cotter Pin Connecting Link  
and Assembled Roller Link



Offset Connecting  
Link



Offset Link and Assembled  
Roller Link

\* These numbers made in riveted type only.

Where two numbers for the same size chain are used, the higher number represents the heavier type in all cases except in 3/4" pitch chains. Nos. 7 A, 85 B and 76 have special light links, though strong in tensile strength. Nos. 75, 8 and 9 are standards for this pitch.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

**SHALER****5-MINUTE  
GARAGE VULCANIZER****SHALER**

This new Shaler Vulcanizer meets the demand for an outfit to use the convenient Shaler Patch-&Heat Units in a commercial way. It uses the standard sizes of Shaler Patches and in addition mends much larger cuts with the new four inch Ex-Long Patches. Makes four repairs at one time in five minutes. No reliable method of vulcanizing has ever approached this for speed and simplicity. Anybody in the shop can now vulcanize as well as an expert. Quick service, bigger profits. It will create enough new business, even in the shop where there is already a vulcanizing plant, to pay for itself quickly. It hangs on the wall, taking little room.

The Shaler Patch-&Heat Unit is always ready for instant use day or night. No waiting, it never fails. It is a complete unit - a compact combination of chemical fuel, vulcanizing pan, and raw rubber patch. Simply clamp it over the puncture, light the non-flaming fuel, and in five minutes you have a permanent, feather-edged repair as strong as the tube itself.

This vulcanizer practically costs the repairman nothing, because with it are included free an assortment of enough patches to pay for the whole outfit if they bring in an average of only 25¢ each. It should easily pay for itself in the first two days.

Additional supplies of patches are available in garage quantities at a very moderate price.

ROUND  
PATCH  
1 3/4 INCH

OBLONG  
PATCH  
1 3/8 x 2 1/4 INCH

EX-LONG  
PATCH  
1 3/4 x 4 INCH

Type M, No. 4, Shaler 5-Minute Garage Vulcanizer .....	\$10.00
Garage Round Patch-&Heat Units 1 3/4 inch (per package of 50) .....	3 00
Garage Oblong Units 1 3/8 x 2 1/4 inch (per package of 50) .....	3.00
Garage Ex-Long Units 1 3/4 x 4 inch (per package of 25) .....	2.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# SHALER VULCANIZERS for MOTORISTS

THE NATIONALLY ADVERTISED LINE

## The Original 5-MINUTE

sells for \$1.50

Heats with solid fuel - Complete with 12 Patch-&-Heat Units

The demand for this wonderful Shaler Vulcanizer has made it one of the biggest selling accessories ever put on the market. Its simplicity appeals to every motorist on sight. Sales are quick and easy and every one sold sells another because this is the kind of an accessory a user recommends to his friends.

The Shaler 5-Minute mends all tube punctures perfectly,

making repairs far superior to any "stuck on" patch. Also makes ideal repairs to rubber

boots, hot water bottles, gloves, etc. Heat is produced by burning a non-flaming chemical heating unit. Each of the twelve patch units furnished with the outfit is complete in itself, consisting of the patent heat unit in its metal container, and the patch of raw rubber attached to the vulcanizing surface of the container. This cartridge is clamped over the puncture and the heat unit lighted. In 5 minutes the repair is welded permanently in place and moulded to a feather edge. Only the patch is heated. Anyone can use it - no danger of overcuring. Each outfit includes nickel plated clamp and 12 patch units (6 round and 6 oblong) packed in display box. Wt. 1 lb. 12 outfits in carton.



This is one of many displays furnished on request.

Type M, No. 5, With 12 Patch and Heat Units, retails at .....\$1.50

## 5-Minute Patch-&-Heat Units

The average user buys several packages each season as they are used not only on tires but on other rubber articles. Few accessories produce such a continuous resale. Packed 12 of a size in air tight cans. 1 doz. cans in carton.

No. M6 Round Patch-&-Heat Units,  $1\frac{3}{4}$  in. diameter, per can of 12 .....75

No. M7 Oblong Patch-&-Heat Units,  $2\frac{1}{4} \times 1\frac{3}{8}$  in., per can of 12 .....75

## HOME GARAGE MODEL

sells for \$12.50

Heats from City Lighting Current. Thermostat Heat Control.

Handles every kind of tube and casing work that the average motorist will care to undertake. It has no equal for use at home where practically all repairing is done. Dealers should recommend it as the best vulcanizer for use where electric current is accessible.

Tube and casing surfaces are  $3\frac{1}{2} \times 7$  in. - twice the size of any other motorist's vulcanizer. Electricity is the safest heat for vulcanizing when temperature is regulated automatically as in this vulcanizer, and conflicts with no garage regulations. Thermostat heat control maintains the exact vulcanizing temperature so that a tire cannot be overheated, and by maintaining this temperature as long as necessary, permits curing through the thickest tread as well as making superficial repairs. Upon connecting the vulcanizer to any lamp socket, the temperature quickly rises to the required degree and remains there as long as the current is turned on. No regulating required. All parts of the repair are heated alike. When several repairs are to be made in succession, the hot vulcanizer can be moved from one to the other by the cool handle. One or two tubes can be mended at a time. Outfit includes tube-shelf, ten foot conducting cord, thermometer, repair material and illustrated instructions. Current consumption 70 watts. Weight 13 lbs.

Repairing Tube



Repairing Casing on Wheel.

Type D, No. 83, Polished Nickel, for D. C. or A. C. ....\$12.55

When ordering, specify voltage of your city current.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

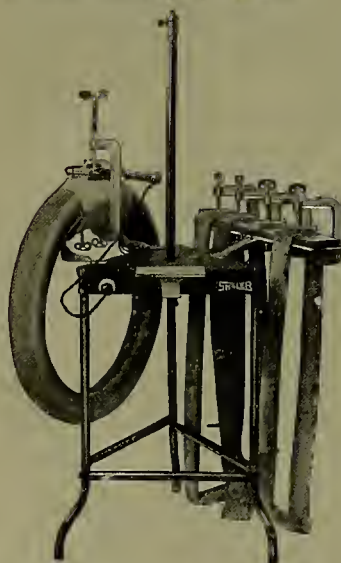


**SHALER****SHOP VULCANIZER**

HEATED FROM LIGHTING CURRENT

**COMPLETE PLANT**

Some of the advantages of a vulcanizing plant heated electrically are simplicity, portability, quick heating, and that each unit may be purchased separately, attached to any workbench or table and used for its own distinct kind of work. Furthermore, the use of electric heated vulcanizers is perfectly safe and conflicts with no garage regulations.



This plant, Type ACE, consists of the complete units Type A, Type C and Type E, mounted on a strong tubular stand. It will do the same perfect work and has the same capacity as Type NPR steam plant - twenty tubes and one casing per hour. The temperature is controlled automatically.

Types C (inside casing form) and E (tube plate) are permanently attached to the stand and have separate switches to permit independent heating. Type A (outside casing form) has five feet of conducting cord ending in a plug which fits a socket in the stand or any lamp socket if work is to be done elsewhere on inflated tires. All electrical wiring is complete in the stand and connection to city current is made overhead, out of the way, through a plug at the top of the upright standard by means of extension cord to any lamp socket. No special wiring needed as the entire apparatus consumes less current than an electric flatiron.

Type ACE No. 101 for A. C., shipping weight 115 lbs (Specify voltage when ordering) \$65.00  
For rheostat controlled direct current equipment add \$10.00 list

Stand only - wired, for present users of electric equipment, shipping wt. 40 lbs.....\$7.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

**UNITS WHICH MAKE UP PLANT**

Can be purchased and used separately.

**TYPE A--Outside Casing Form and Auxiliary Tube Vulcanizer.**

Corresponds with the outside casing form of Type NPR, that is one face is shaped to mend rim cuts, while the other is curved to fit large tread repairs. In addition there is a flat surface for mending one or two tubes at a time on an asbestos inlaid shelf that attaches to workbench. Patented heating unit distributes heat uniformly to all parts of a repair. Temperature controlled automatically by a thermostat. No watching or regulating. Fits all sized tires and can be used for mending sandpockets, cuts, etc., while tire is fully inflated on wheel. Supplied with tube shelf, thermometer, conducting cord and full instructions. Current consumption 70 watts per hour.



Type A No. 61, Polished Nickel for A. C. and D. C.  
Weight 15 lbs.....\$13.50

**TYPE C--Inside Casing Form**

Corresponds in every detail except source of heat with inside casing form on Type NPR. Is used with Type A for making casing repairs by the wrapped tread method. Fits any sized tire. Supplied with binding tape, clamp, brackets for attaching to bench, conducting cord and thermometer. Current consumption 100 watts per hour.



Type C No. 71, Thermostat Control A. C. only.....\$20.00  
Weight 18 lbs. Specify voltage when ordering.  
For rheostat controlled direct current equipment add \$5.00 list.

**TYPE E--"Gang" or Multi-Tube Model**

4 1/2 x 24" surface mends 6 tubes at once or a two foot slit at one setting. Furnished with 4 patent clamps and blocks for different sized repairs, conducting cord and two thermometers. Current consumption 150 watts per hour.

Type E No. 91, Thermostat Control A. C. only.....\$25.00  
Weight 40 lbs. Specify voltage when ordering.  
For rheostat controlled direct current equipment add \$5.00 list.

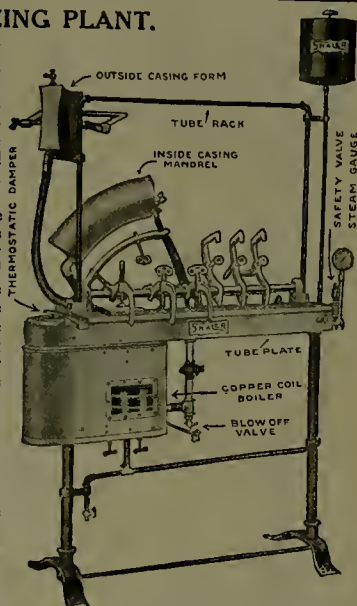


**SHALER****REPAIR SHOP VULCANIZERS**

THE ACKNOWLEDGED STANDARD.

**STEAM VULCANIZING PLANT.**

Covers all requirements of a garage or repair shop. Handles every practicable sort of tube and casing repairs, (about 200 tubes and a dozen casings daily). Machined tube plate,  $4\frac{3}{4} \times 30$ ", cures six tubes as quickly as one and heats independently of casing attachment. Swivelled clamps insure even pressure to all parts of any tube repair. All sizes of casings repaired by approved wrapped tread method as used by tire manufacturers. Simply build up a re-enforcement of fabric *inside* the casing, and fill the hole with Para gum (it is unnecessary to cut away a lot of expensive rubber and fabric). The inside casing mandrel, 14" long, then applies the heat directly against the fabric; the outside casing form which has one side shaped for tread repairs, the other to fit close to the rim, heats from the outside. A wrapping of tape and the Shaler clamping device force new and old material into contact under enormous pressure. No air bags. The repair becomes the strongest part of the tire. In order to fail, the re-enforcement would have to be torn loose and blown through the original hole, practically an impossibility. No attention is necessary after lighting burner. The boiler, a copper coil, raises steam in about twenty minutes and holds it at the right pressure indefinitely, a thermostat automatically regulating the flame of the gas or gasoline burner. Steam gauge and thermometer indicate both pressure and temperature. Safety valve eliminates danger of explosion.



- Type NPR No. 41—Completa Garage Outfit as shown, weight 200 lbs.....\$70.00  
Includes 6 clamps and blocks for tube work, bead strips for rim cuts, casing clamps, tapa for wrapping treads, thermometer, steam gauge and safety valve.
- Type NPR No. 42—Same as above except two sets of casing forms give double capacity for casings. Weight 260 lbs.....\$90.00
- Type N No. 41—Same as above but equipped for tube work only, ample heating capacity permits adding casing forms and changing into either of above models at moderate cost. Wt. 160 lbs..\$50.00  
Gas or gasoline burner as ordered. If none specified, gasoline burner furnished.

**STEAM TUBE VULCANIZER.**

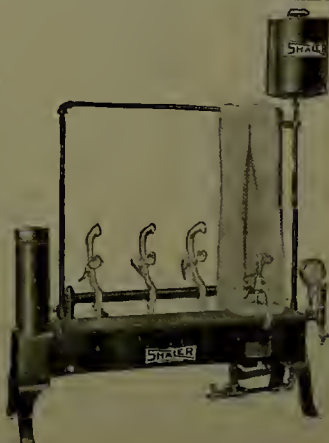
This model is designed to do every kind of tube repairing. It cures four tubes at one time or single repairs up to two feet long.

Can be used either on floor or workbench as the  $4\frac{3}{4} \times 24$ " machined tube plate stands 9" high. Cost of operation less than 2¢ per hour. Steam is raised in fifteen minutes and maintained at proper pressure without regulating, by the Shaler automatic thermostat control. Equipped with steam gauge, safety valve, and four clamps and blocks same as larger models.

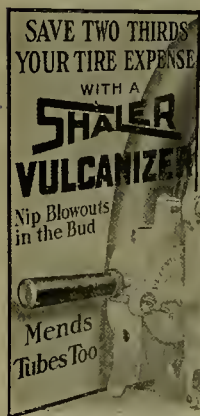
No other guaranteed steam vulcanizer at near the same price has so great a capacity, heats so quickly, or operates so simply.

Gas or gasoline burner as ordered. If none specified, gasoline burner furnished.

Type L No. 40, shipping weight 75 lbs.....\$35.00



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

**SHALER****VULCANIZERS for MOTORISTS**  
THE NATIONALLY ADVERTISED LINE.**Silent Salesman FREE**

Steel background lithographed in four colors to represent section of tire on wheel. Vul-Kit is clamped to it as if in operation.

alcohol produces the correct heat without dangerous exposed blaze or smoke. A measure gives the proper fuel charge. No watching or regulating. The fuel is absorbed by a wick so there is no flaming liquid to spill. Handle detachable for packing to carry in car. Complete with repair rubber, cement and full instructions. Polished nickel. Weight  $4\frac{1}{2}$  lbs. One dozen in carton. Should be in every accessory stock.

Type G, No. 32, retail price.....\$3.50

**The Popular VUL-KIT - sells for \$3.50**

*Gasoline Heated - For all Sized Casings and Tubes*

The sales of this well known tire saver have grown enormously as tire prices have increased. Take advantage of the big advertising. The "Shaler Vul-Kit" is known to every auto owner as the sure means of doubling tire mileage by sealing casing cuts before dirt and water get in to rot the fabric. Casings always need care that will be given only if the motorist has his own vulcanizer. It is the stitch in time that saves nine.

The Vul-Kit has a  $3\frac{1}{2} \times 4$  inch curved surface for mending cuts, sandpockets, etc., in all sized casings without removing tire from wheel or letting out the air. A machined surface of 10 square inches mends all tube injuries, curing clear through and making permanent repairs of any size. The asbestos in-laid pressure plate is swivelled to avoid squeezing one side of tube tighter than the other and to enable the largest tube to be handled without pinching its edges. A lamp burning gasoline or



Repairing Casing on Wheel



Repairing Tube

**GUARANTEED SHALER VULCANIZING RUBBER and CEMENT**

For use with Vul-Kit, Ford-Kit and other small gasoline heated vulcanizers.

Shaler Quick-Cure Para Rubber,  $\frac{1}{2}$  square foot 40c; 1 square foot.....75c  
Shaler Quick-Cure Vulcanizing Cement,  $\frac{1}{4}$  Pt. 25c;  $\frac{1}{2}$  Pt. 35c; 1 Pt. 50c

**MOTORISTS' REPAIR MATERIAL ASSORTMENTS**

These are put up complete in heavy screw-top containers.

No. 1 Assortment (Rubber 50c, Cement 15c, Waxed Paper 10c).....75c  
No. 2 Assortment (Rubber 65c, Cement 25c, Waxed Paper 10c).....\$1.00

**DEALERS NOTICE**-The manufacturers of this standard line of accessories supply a large assortment of display fixtures, hangers, circulars with dealers name, etc. Tell us what models you want to feature and we will get these selling helps for you.

**VULCANIZING TOOL KIT**

This kit of eight especially designed tools is a great assistance in tire repairing. Consists of: Roller (35c), Plug Pliers (20c), Probe (15c), Rubber Roughener (35c), Cement Brush (20c), Shear Snips (65c), Knife (35c), Stitcher (50c) and Chase Leather Containing Roll. If purchased separately these tools alone would cost more than the complete outfit, including the Chase Leather Case.

Each .....\$2.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## GLASS AND GASKET CUTTERS



No. 263 GLASS CUTTER

For cutting circles in sheet or plate glass. Cuts circles from 2 inches to 22 inches. Cut head light discs, window ventilator circles, auto wind-shield corners, arched window lights, etc. Anyone can use it. Requires no science. Its so simple and practical.

No. 263. Price, each .....\$1.50



WASHER CUTTER No. 2

Cuts washers up to 12 inches diameter. Blades can be lowered as they wear off, and when used up. Instead of buying a new washer cutter, blades can be replaced at a slight cost.

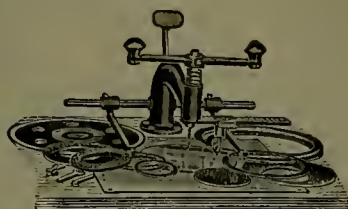
No. 2. Price, each .....\$1.50  
Extra blades, each ..... .25



WASHER CUTTER No. 41

A strong, well made device for cutting washers from 1 inch to 5 1/2 inches; provided with removable blades, adjustable as to length of cutting edge as well as position. Blades are easily removed for sharpening, or replaced when worn out. Nicely polished; weight 11 oz.

Each .....\$1.50



SPRINGFIELD CIRCLE CUTTER

For cutting lamp glass, soft sheet copper, rubber gaskets, felt and fibre washers, etc., to any size circles from 1 to 14 inches.

Positive measuring scale for determining sizes. This machine may be fastened to an ordinary work bench or table having level surface, using a sheet of cardboard as a cutting foundation; this preserves the edge of the knife and prevents cutting into or marring the table surface.

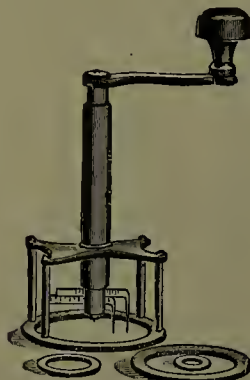
No. 1. Price, including steel point glass cutting tool, one knife for cutting square edge, one knife for cutting 45 degree bevel edge and one wrench.

Each .....\$7.50

No. 2. Price, including a special quick acting and effective clamp for holding the work in place during the process of cutting.

Each .....\$15.00

Illustration shows tool with clamp.



No. 0. WASHER AND GASKET CUTTER

This machine will hold material and knives in place while cutting, consequently you have perfect control of operation. Equipped with two knives to cut outside and inside in same revolution. Has no set screws. Hold the knives with one hand, the handle with the other, and adjust the knives very quickly. Brads in base of frame keep material from slipping while washer is being cut.

No. 0. Price, each .....\$1.30



GAUGE GLASS CUTTER

Cuts any size from 1/8 inch to 5 inches.

Price, each .....\$0.30

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## JACKS



Badger No. 3



Badger Sta. Footlift No. 7



Badger Truck No. 5

The Badger Jack is too well known to need any lengthy description. No better workmanship nor material could be put in any jack. There are no complicated or loose fitting parts to get out of order. The short stroke makes lifting easy and rapid. The pawls automatically lock, preventing rack from dropping with a load. The reverse is simple and positive.

## SPECIFICATIONS

Number	Height	Raise	Capacity	Weight	Price
3	11 in.	6 in.	1 ton	9 lbs.	\$3.50
7	11 in.	6 in.	1 ton	10 lbs.	4.50
5	11½ in.	5½ in.	3 tons	14 lbs.	7.50



Badger Gear Jack No. 9

The worm locks the rack, making it impossible for the rack to drop under a load. A two-piece 20 in. handle is furnished, gears, pinions and worms are hardened steel. With the adjustable footlift feature this jack's range is from 4 to 17 inches.



Badger 5-Ton Truck No. 55

Will handle the heaviest motor truck. The footlift increases the range of the jack to accommodate any height of axle. A broad, substantial base, 5x8 inches, prevents tipping of jack. A 24 inch heavy hickory handle is furnished.



Victor Jack No. 1

Solid and substantially made of malleable iron throughout. Parts carefully machined. Large base. Black japanned. Handle stroke short and powerful

Number	Height	Raise	Capacity	Weight	Price
9	11¼ in.	6 in.	1 ton	14½ lbs.	\$10.00
55	14½ in.	6¼ in.	5 tons	28 lbs.	14.00
Victor	10 in.	6 in.	1 ton	5½ lbs.	1.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## TOPPING AUTO JACK



Normal Position Partly Raised  
Illustration shows the Topping Pleasure Car Jack

The easiest operated Jack. Has many advantages that no other Jack has. Simple construction and a No-Wear-Out guarantee.



## A New Type of Auto Jack

Passenger Car Jacks, each .....\$6.50

Each jack carefully packed in a self-contained carton.

## Hartford Auto Jack

Made for the motorist who appreciates quality of construction, ease of operation, long satisfactory service and is willing to pay a little more for these advantages.

Convenience and ease of operation are coupled with a construction and materials which mean practically wear-proof quality. Its great power and easy manipulation under even the heaviest loads are due to the ingenious gear combination employed.

High quality and sturdy strength are manifest in the very appearance of the Hartford Auto Jack, which goes to the purchaser in a convenient bag of stout canvas protecting its finish from injury in the tool box. Each Jack is thoroughly tested at the factory—and is guaranteed perfect.

Each .....\$8.00

## TIRE SAVING JACKS

In this time of increasing tire costs it is false economy to be without tire saving jacks. When your car is to stand in the garage for some little time it takes but a few seconds to jack it up, taking the weight off the tires and thereby increasing their life.

Moore Tire Saving Jacks are so easy to operate that a boy can jack up the heaviest car in 30 seconds.

Three sizes.

No. 2, 30 inch wheels, per set of 4 ..... \$8.50  
No. 3, 32-36, per set of 4 ..... 10.00  
No. 4, 37-40, per set of 4 ..... 12.00

Racine Tire Saving Jacks may also be used as a lifting jack. Can be used under hub or axle. Swivel top allows it to be used in any position. It is the only jack of its type with enclosed rack bar. Fits any wheel up to 36 inches.

Price, per set of 4 .....\$8.50



Racine Tire Saving Jack

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# Ellis-Smith Auto Towing and Turn Jacks

## COMBINATION AUTO TOWING AND TURN JACK



### For Towing in Crippled Cars

Simply substitute the telescope handle, insert swivel towing top. You are then ready to tow in the cripple. Done in two minutes.

## AUTO TURN JACK



### For Garage Use

With bent  $5\frac{1}{2}$  foot handle that swings way around back of the front wheel.

One man with the Auto Turn Jack can put a car in any space in less time than four men can with or without any other portable device. Its simplicity, durability and quick action makes it one of the best investments a garage owner can make.

It is poor economy to do without an Auto Turn Jack no matter what the present equipment may be. There is nothing on the market that compares with the Auto Turn Jack for efficiency.

Price, each .....\$40.00

### THE COMBINATION

## Auto Towing and Turn Jack

is a strong compact device that will stand the rough pounding of concrete floors, cobblestone pavements and rutty country roads without failure. It runs surprisingly easy; the wheels have a three-inch face and Hyatt Roller Bearings, running on a case hardened removable steel axle.

Two interchangeable handles are furnished; the regular for inside work and the extra heavy telescopic for towing.

Price, each .....\$50.00

## GARAGE JACK



## TOWING TRUCK



The E and S Towing Truck is a giant in strength and durability. No working parts or joints to wear or break. Handles all cars, large or small, from the front or rear.

14-inch wheels equipped with roller bearings. Height adjustable to 18 inches. Weight 145 lbs.

Price each .....\$40.00

Especially adapted for use in public garages. Large 10-inch wheels make it easy to move the heaviest cars. 10-inch wheels; 5-foot curved handle, automatic foot trip and adjusting post. Weight, 100 lbs.

Price, each .....\$35.00

## SERVICE JACK



### For Public or Private Garages

Strong, simple and quick acting. Can be used as a lifting or turn jack. 5-foot lifting handle. Diameter of wheels, 6 inches; adjustable steel post, 5 inch adjustment. Weight 25 lbs.

Price, each .....\$7.50

## JUNIOR JACK



Portable Turn Table for Public and Private Garages. 5 foot lifting handle, post adjustable up to 15 inches. Diameter of wheels,  $6\frac{1}{2}$  inches. Weight, 60 lbs.

Price, each .....\$15.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## WEAVER AUTO TWIN JACK

Saves Labor and Floor Space.

These jacks possess all the advantages of a ball and roller bearing turn-table—transport—lifting jacks and tire rests.

One man and an equipment of these jacks can do three men's work.

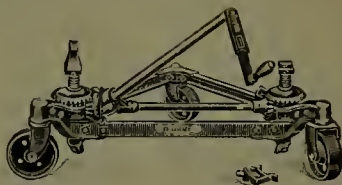
Indispensable for moving, washing, unloading or storing cars—testing brakes—or general repair work.

Safe, substantial and convenient.

Weight, 50 lbs.; lifting capacity, 4000 lbs.; diameter of wheels, 1 1/4 inches; length of handle, 26 inches; diameter of screw, 1 1/16 inches.

Price, pair, regular size .....\$26.00

Price, each ..... 15.00



## WEAVER AUTO TWIN JACK EXTRA HEAVY

Is larger, stronger and heavier than the regular size.

Weight, 110 lbs.; lifting capacity, 8,000 lbs.; diameter of wheels, 7 inches; length of handle, 34 inches; diameter of screw, 1 1/4 inches.

Price, pair .....\$46.00

Price, each ..... 25.00



## WEAVER NEW-WAY JACK

Capacity, 5,000 Pounds

A One Man Jack  
for Handling  
Pleasure Cars  
or Trucks

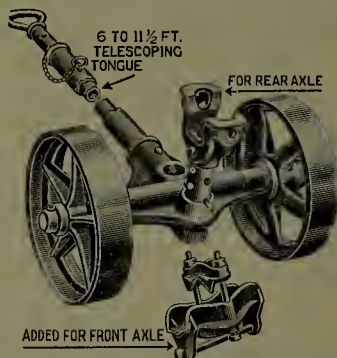
The Weaver New-Way Jack is designed to meet the one particular kind of service which the Weaver Auto Twin Jacks will not meet to the best possible advantage. For quick action in lifting, or moving cars or trucks in the Garage, Show Room, Service Station, Tire Shop, etc., there is need of a strong compact, easily operated, quick action lifting and transporting Jack. These requirements are met in every detail in the Weaver New-Way Jack illustrated above.

### CONSTRUCTION.

As is very apparent from the cut, the Weaver New-Way Jack is extremely heavy and well constructed. The lifting mechanism is of high grade hardened steel and every part is designed with a view of giving the Jack a great margin of safety in handling the maximum load of five thousand pounds. The wheels are mounted on roller bearings and the caster under the front is equipped with a full set of ball bearings. Shipping Weight, 100 lbs.

LIST PRICE .....\$35.00

## WEAVER AUTO AMBULANCE



### FOR DISABLED AUTOMOBILES

The Weaver Auto Ambulance is the only thoroughly practical and universal device for economically transporting disabled automobiles to the Repair Shop. The Auto Ambulance is designed extremely strong, but all unnecessary weight has been eliminated, so that it may be placed in the service or towing car and carried to the wreck, instead of being pulled behind the service or towing car, as would be necessary with a heavier machine. Simply by removing or replacing one bolt, the tongue may be taken from or placed into the Ambulance frame.

The construction throughout is extremely strong, but designed to eliminate all unnecessary weight. Telescoping tongue is of double strength steel tubing; 1 1/4 inch steel axle extends entirely through the malleable iron frame; malleable iron saddles; 20 inch tread; shipping weight, complete, 140 lbs.

LIST PRICE .....\$36.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

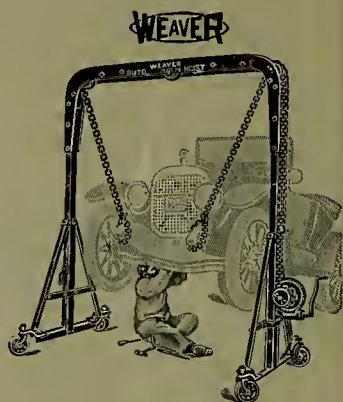
## SINGLE OR DOUBLE SUSPENSION—SAFETY—WORM HOIST— BALL AND ROLLER BEARING CASTERS

This is one of the most convenient and useful articles of garage equipment on the market. Note particularly the unobstructed space under the car, allowing ample room for two or more mechanics to work with absolute freedom.

### Construction.

Weaver Auto Hoist is carried upon four ball and roller bearing casters 5 inches in diameter which permit it to be transported with perfect ease. The construction throughout is of steel giving the greatest possible strength in comparison with its height. Height 8 feet to 9 feet. Shipping weight, 575 pounds.

LIST PRICE, f. o. b., Springfield,  
Illinois ..... \$125.00



AUTO HOIST

## WESTON DIFFERENTIAL CHAIN HOIST

These hoists have standard size sheaves and full sized chain of best "Staffordshire" iron, and "gear" accurately in properly formed "pockets," resulting in freedom from derangement under the roughest usage.

Capacity	Medium Distance Between Hooks		Net Weight	Price Complete
¼ ton	16 in.	6 ft.	20 lb.....	\$18.00
½ ton	19 in.	7 ft.	28 lb.....	21.00
1 ton	24 in.	8 ft.	51 lb.....	28.00
1½ tons	30 in.	8½ ft.	81 lb.....	36.00
2 tons	35 in.	9 ft.	122 lb.....	45.00

## WEAVER GARAGE PRESS

### THIS PRESS IS AN ASSET TO ANY REPAIR SHOP

It would mean much to you in dollars and cents to be in position to handle your repair work more quickly, accurately and in a more truly mechanical manner.

You will save hours every day by using this Press instead of a sledge hammer and a block. You will also gain prestige with the motor public through performing your work more scientifically and satisfactory than the "other man" who has not the advantage of this equipment.

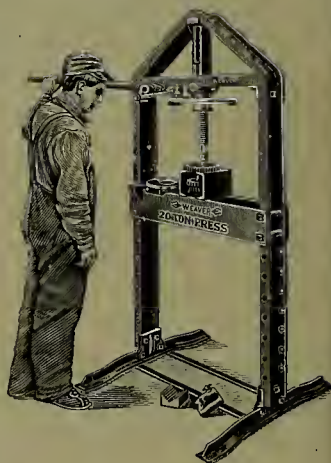
It is especially designed for garage work, both in construction and price.

### CONSTRUCTION AND OPERATION

The frame is of one piece of heavy channel steel; the hand wheel is 15 inches in diameter, and the weight of wheel and screw is carried upon ball bearings. The hand lever has a leverage of over 1,500 to 1. The thrust of the screw is directed against heavy Bronze Thrust Bearings. The screw is 2 inches in diameter, with 3-pitch Acme thread and has a range of movement of 12 inches. The screw does not revolve.

The bolster which carries the plate can be set at any desired height with extreme adjustment of 48 inches. The width between frame uprights is 32 inches. Floor space 36x36 inches; weight, 425 pounds. Capacity, 20 tons.

Price ..... \$85.00



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



**WEAVER**

## Tire Spreader

For the Convenient Inspection and Repair of Tire Casings.

The Weaver Tire Spreader is the only efficient means of spreading a casing, so that the interior may be either inspected or repaired. This operation is necessary in repairing every puncture, blow-out or other damage which is not readily apparent when the tube is removed from the casing.

By means of a quick action foot lever the casing is spread, exposing the interior for convenient and efficient inspection, or repair, without injuring the tire or the fabric, as is done when the casing is turned entirely inside out.



Shipping Weight 65 lbs.

LIST PRICE .....\$24.00  
EXTRA BUFFING PLATE ..... 3.00



**WEAVER**  
**Puller**  
**Clamp**  
FOR  
**WEAVER**  
**20-TON**  
**PRESS**

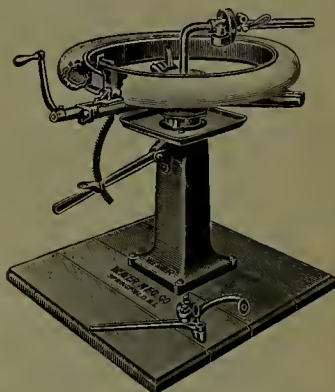
THE WEAVER PULLER CLAMP is designed essentially for service with the Weaver 20-ton Press, and is used to securely clamp and support ball races or similar parts which can only be successfully supported by being securely clamped from the side.

MADE IN TWO SIZES

Small (9-inch plate) 7 Lbs., LIST PRICE....\$ 6.00  
Large (16-inch plate) 30 Lbs., LIST PRICE.... 10.00

**WEAVER**

## Universal Tire Changer



The only mechanical means ever perfected for dismounting and remounting all styles and sizes of pneumatic automobile tires.

The Weaver Universal Tire Changer will handle any style and size pneumatic Auto Tire and demountable rim. The most difficult tires can be changed in a small fraction of the time usually required by the primitive methods, usually employed.

The saving of time and labor will pay for the Equipment within a very short time and the more prompt and efficient service, which you will be able to give your trade will soon increase your patronage. New patronage will also be attracted to your Tire Shop, on account of this better service and improved manner of handling their Tires and Rims.

### No Injury to Tires

Every operation in the handling of Tires by this Universal Tire Changer is done by means of smooth finished rollers. There is positively no possibility of injuring either the casing or rim, even in the most stubborn cases.

NO POUNDING, NO JAMMING, NO CUTTING.

### Construction

This equipment has been very carefully designed, with a view of eliminating the separate individual tools which have been so common and to have a compact easily operated machine, that will perform all operations with the fewest number of parts.

PRICE, COMPLETE .....\$65.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## Weaver Towing Pole



The danger and inconvenience of towing disabled cars is practically eliminated by the Weaver Towing Pole. The brakes of the towing car are in absolute control of the rear car. No danger of jamming on down grades or on sudden stops in crowded streets. Neither is there danger of a long tow line tripping pedestrians, or being run into by other cars.

### Spring Absorbs All Shocks.

The heavy coil spring-cushions all pulling or ramming shocks so that there is no jerk or jar on either car. The connecting clamps are equipped with heavy steel chains, thirty inches long with a secure spring-latch.

This clamping device gives the pole a practically unlimited range of application—either to axle, spring or frame of either car. THE POLE TELESCOPES and is adjustable from 5 feet 6 inches to 8 feet. It is made of double strength steel tubing. Shipping weight 30 lbs.

Price ..... \$12.00

## Tow Rope

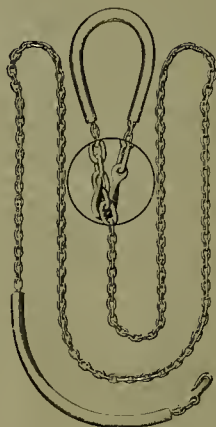


In emergency, rope is the first thing required. It is indispensable for touring or rough cross-country traveling.

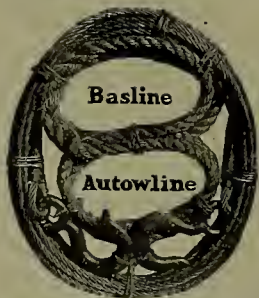
Tow Rope is made of the finest quality of Manila hemp, especially for motorists, and is greatly superior in appearance, strength and wear to any hardware store rope. Equipped with galvanized hook for quick and easy attaching.

Two sizes: No. 1, 30 feet,  $\frac{1}{2}$  in. diameter, for light cars. Price .....\$3.00  
No. 2, 40 feet,  $\frac{3}{4}$  in. diameter, for medium weight and heavy cars. Price ..... 5.00

## American Auto Towing Chain



## Basline Autowline



"Basline Autowline" is a 5-16 inch wire rope thirty feet long, especially constructed for towing autos. Even though it weighs only six pounds, coils up flat and can be tucked away under a seat cushion, yet—"Basline Autowline" can pull a 4,000 pound touring car up a twenty per cent. grade!

Price, each .....\$4.95

Made of the finest American Chain Co. steel chain No. 280, with No. 66 S. Hook flattened on each end, so that it enters the links easily and without binding. Each end is covered with a leather casing 15 inches long, chain and hooks japanned. Packed one each in a canvas bag.

18 feet long, each .....\$4.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

**Niagara Grinder No. 4**

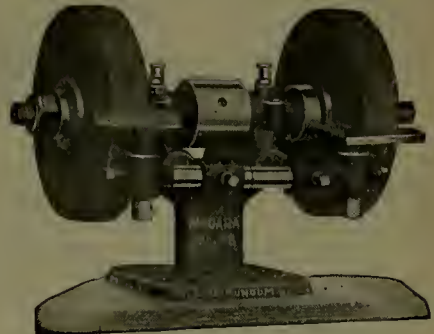
Built for general machine shop work, and for automobile garages where the power-driven grinder is not available. Has enclosed cut gears and bronze bearings. Gears run in an oil well formed by the bottom casting. The casting is of the best grade of cast iron and the handle and clamp of malleable iron. Fitted with a chisel-grinding guide and tool rest and a special cupped Carborundum wheel 7½ in. in diameter and 1¼ in. thick.

Weight packed .....26 lbs.  
Complete, each .....\$11.00

**Niagara Grinder No. 2**

It is strong, durable and capable of standing a lot of wear and tear. The machine is fitted with an adjustable tool-grinding guide and a Carborundum wheel 5 inches in diameter and 1 inch thick of medium grit.

Weight packed .....7 lbs.  
Complete, each .....\$6.00

**Niagara Grinder Head No. 28**

Built with a view to giving the strongest and most durable grinder head possible. The flanges overhang and thus protect the bearings. The bearings are wide and adjustable so as to take up wear. The tool rests are adjustable from all angles. The grinder head is fitted with two Carborundum wheels of medium grit, 7 inches in diameter and 1¼ inches thick, but will carry wheels up to 10 inches in diameter.

Weight packed .....36 lbs.  
Niagara Grinder Head No. 28, price each,  
complete .....\$20.00

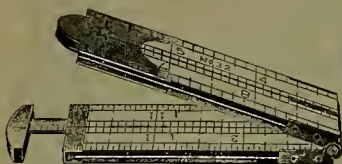
**Niagara Grinder Foot Power Attachment No. 21**

The No. 21 attachment is for the No. 4 Grinder. Illustration shows attachment fitted to No. 4 machine. The attachments are made of malleable iron and are adjustable.  
Attachment No. 21, each .....\$2.25

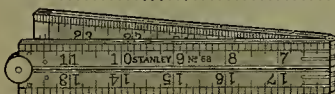
ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## RULES

## Boxwood



No. 32. Boxwood, 12-inch caliper, arch joints, 4 fold, graduated 8ths, 10ths, 12ths and 16ths, 1 inch wide.  
 Price, each .....\$0.60  
 No. 32½. Boxwood, 12-inch Caliper, brass bound arch joint, 4 fold, graduated 8ths, 10ths, 12ths and 16ths: 1 inch wide.  
 Price, each .....\$0.85



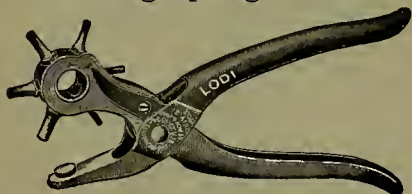
No. 68. Boxwood. Two feet, 4 fold, round joint, graduated 8ths and 16ths; 1 inch wide.  
 Price, each .....\$0.25

## Ball-Pien Hammers



Weight.....	4 oz.	6 oz.	8 oz.	12 oz.	16 oz.	20 oz.
Each .....	\$1.00	\$1.00	\$1.00	\$1.00	\$1.05	\$1.15

## Revolving Spring Punches



Extra cast steel, revolving, polished, 6 tube.  
 Price, each .....\$1.25

## Copper Hammer



Copper Hammer. Made of solid bar pure copper, used for hammering finished work without marring it; a useful tool for any mechanic. Weight without handle.  
 Weight..... ½ lb. 1 lb. 1½ lbs. 2 lbs. 2½ lbs.  
 Numbers..... 1 2 3 4 5  
 Price, each.....\$0.75 \$1.25 \$1.75 \$2.25 \$2.50

## Victor Zig-Zag Rules

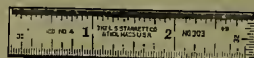


Victor yellow enamel zig-zag rules have joints containing a stiff spring holding them rigid when open. In ordering use number of rule.  
 No. 804. Length 4 ft., by 16ths. Each.....\$0.35  
 No. 806. Length 6 ft., by 16ths. Each ..... .50



No. 84. Boxwood. Two feet, 4 fold, square joint, half brass bound, graduated 8ths, 10ths, 12ths and 16ths.  
 Price, each .....\$0.60

## Spring Tempered Rule



Spring tempered rules are made from 18 gauge steel with a thickness of 3-64 inch.

Width, in. ....	¾	¾
Length, in. ....	4	6
Price, each ...	\$0.50	\$0.65

## Tinner's Shears



Tinners' steel hand shears. Very strong for cutting tin, steel tubing, cable, etc.

	No. 8	No. 9	No. 10	No. 11	No. 12
Size .....	3½ in.	3 in.	2½ in.	2 in.	1½ in.
Each .....	\$2.40	\$1.80	\$1.60	\$1.40	\$1.20

## Rubber Mallets



Made of especially prepared rubber, used for hammering finished work without marring it. A useful tool for any mechanic. Made in three sizes.

		Price
		Each
No. 1.	2¾ inches long, 1¼-inch face	\$0.75
No. 2.	3¾ inches long, 2-inch face	1.00
No. 3.	4 inches long, 2¾-inch face	1.25

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## Bernard's Parallel Cutting Pliers



Bernard's Cutting Pliers. Open throat, parallel jaws, all nickel-plated.

Sizes, inches ..... 5½  
Price, each ..... \$2.25

## "Victor" Universal Pliers



The upper jaw is built on such lines that it will push anything its entire length or width to the straight jaw, thus giving a better hold by 50 per cent. than any other plier.

No. 305, nickeled, 7 inches, each.....\$0.75

## B. & S. Improved Combination Pliers



Gas Pliers, Wire Cutters, Wrench and Screw Driver combined.

Changes from size of gas burner to ¾-inch pipe, and from 3-16 inch round to 1½ inch round or square.

Size	Nickel
5 inches	.....\$1.00
6 inches	..... 1.25
8 inches	..... 1.50
10 inches	..... 1.75

## Diagonal Cutting Pliers



No. 2601

Polished head and jaws, made for the most severe usage. Size, 5½ inches.

Price, each .....\$2.50



No. 1651

Long Flat Nose, 4½ inches. Price, each.....\$1.25

## Nippers



Bernard's End-Cutting Nipper. Open throat jaws. Its compound system of leverage gives this tool a very high power.

Sizes, inches	4	6
Price, each	.....\$2.00	.....\$2.50

## Irving Plier



Light combination side wire cutter.

No. 1242, Nickel, 5½ inches.....\$0.75

## Cee Tee Combination Pliers



Made of 60 per cent. carbon crucible steel, drop forged, hardened and oil-tempered. The slip joint permits of changes to a wide range of sizes in either round pipe or nuts. Corrugated handles, which insure a perfect grip without hurting the hand. Accurately machined with drilled holes and milled teeth. Heavily nickel-plated. Made in one size and one finish only. Packed one in a box.

Price, each .....\$0.25

## V. & B. Nut Plier



The best designed plier for use on bolts and nuts. Especially adapted for use around automobile and gas engines.

	Per doz.
No. 3, holds nuts from 3-16 in. to ¾ in.....	\$6.00
No. 5, holds nuts from 7-16 in. to 1 in.....	7.20



No. 522

Round Nose, 4½ in. ....	\$2.00
Snipe Nose, 4½ in. ....	2.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## Perfect Screw Driver



No. 1



No. 2

This screw driver is the most durable and substantial tool ever put on the market. The body of the screw driver is a one-piece, drop forging and wooden handles are inserted in pockets in the steel body. The end of the steel body forms a hammer head which is very useful in starting screws, or for any use to which a hammer is put. Fig. 2 is for use in tightening up set screws or cap screws. The shank is square and a wrench can be put on it. The size furnished on the regular screw driver (Fig. 1) is the six inch, and on the other pattern is the nine and one-half inch.

Blade length	4	5	6	8	10	12 in.
Diameter	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$ in.
Each	.40	.50	.60	.80	\$1.00	\$1.20

### Machinist

Blade length, 9 $\frac{1}{2}$ ; Diam., $\frac{7}{8}$ ; width pt. $\frac{1}{2}$	\$1.00
Blade length, 10 $\frac{1}{2}$ ; Diam., $\frac{7}{8}$ ; width pt. $\frac{3}{4}$	1.25

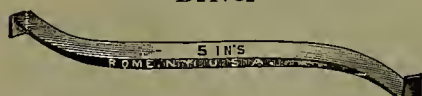
## Midiget Screw Driver



Practical, neatest and best made tool on the market. Just the thing for magnetos, coils, eyeglasses. Full nicked banded point. Knurled handle.

Each .....\$0.15

## Double End Reversible Screw Driver



Made of high grade tool steel. Price, 5-in., 6-in. or 8-in., each .....\$0.50

## Reversible Spiral Screw Driver



## Offset Pliers



Gettatit No. 646

An offset combination slip joint plier. The slickest, quickest and grippiest made. Will do all the work of the ordinary plier and go into many out of the way places where the others will not.

A first class cotter pin extractor and wire cutter as well. Temper finish with polished jaws. 7 in. over all.

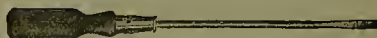
Price, each .....\$0.50

## Rubberoid Screw Driver



Fine tempered blade, with rubberoid handle; cannot become loose or break. Solid blade entire length of driver. Length 6-in., each .....\$0.80

## Cabinet Screw Driver



Very thin, long blade, finely tempered, small handle; just the thing to get in narrow places.

2-in.	4-in.	5-in.	6-in.	8-in.	10-in.
\$0.30	\$0.35	\$0.40	\$0.45	\$0.50	\$0.55

## Climax



Made from smooth, flat steel, with rounded corners. Blade is hardened and point ground. Nicely nickel-plated.

Each .....\$0.15

## "Yankee" Pocket Magazine



### SCREW DRIVER NO. 60.

Handle holds four blades, one slotted for nipples. When closed it is 3-in. long,  $\frac{5}{8}$  in. diameter.

Each .....\$1.00

The advantages of this over similar tools are its greater simplicity, compactness, strength and durability, and that it can be used as a rigid screw driver when closed or extended, as well as to push or ratchet screw in or out.

Each .....\$2.75

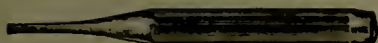
## Universal Clamping Jaw



This tool can be used as a hand clamp for holding any round object while drilling or threading or in connection with a bench vise, thereby converting it into a pipe vise.

Will hold round stock,  $\frac{1}{4}$  to 1 in. Price, each .....\$0.75

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

**MACHINE PUNCHES—REGULAR**

Number	11	12	13	14	15	16
Diam. of point, in.	8/32	7/32	6/32	5/32	4/32	3/32
Length, inches	6	6	6	6	6	6
Price, each	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20

**MACHINE PUNCHES—EXTRA LENGTH**

Number	80	90	100
Diameter of point, inches	3/16	7/32	1/4
Length, inches	8	9	10
Price, each	\$0.24	\$0.34	\$0.50

**No. 45C. CENTER PUNCHES**

Length, 4½ in. Price, each.....\$0.30

**BELT PUNCHES**

Punches so forged that they will not stick after hole is punched. Points closed in to give perfect clearance for wads

Number	103	105	107	109	111	113
Size	½	5/32	13/64	¼	5/16	¾
Price, each	\$0.25	\$0.30	\$0.30	\$0.35	\$0.40	\$0.50

**No. 40. KNURLED CENTER PUNCH**

Length, 4 in. Price, each.....\$0.20

**RIVET SET**

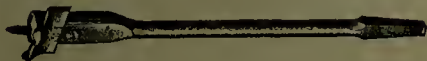
List No.	For Copper Rivets, No.	Each
2	7	\$0.60
3	8	.55
4	9	.55
5	10 and 11	.40

**SCREW DRIVER BITS**

Square shank, extra quality, for bit brace.

Model A, designed for light work. Price, each....\$0.24

Model B, designed for heavy work. Price, each.... .30

**EXPANSION BITS**

Clark's Expansive Bits, packed each with two cutters. Cutters adjusted by screw, made in two sizes.

No. 1. Large, cuts from ¾ to 3 in. Price, each...\$1.75

No. 2. Small, cuts from ½ to 1½ in. Price, each 1.25

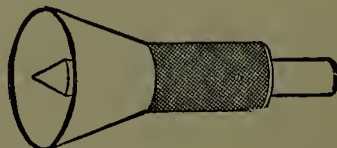
**No. 45-P. PRICK PUNCH**

Length, 4½ in. Price, each.....\$0.30

**ARCH PUNCHES**

Forged from solid bar and are not welded.

Size, in.	7/16	1/2	5/8	3/4	7/8	1	1½	1½
Price, each	\$0.90	1.00	1.00	1.10	1.35	1.50	1.70	2.20

**BELL CENTERING PUNCH**

Bell Centering Punch. A useful tool for every machinist; very accurate, made of best steel, tempered. Capacity up to 1½ in. Price, each.....\$1.00

**COUNTERSINK BITS**

Flat Pattern

No. 13. Forged from extra warranted steel. Designed for use on iron. Price, each .....\$0.30

**Countersink Bits**

Rose Pattern

No. 14. Forged from extra warranted steel. Designed for use on brass. Price, each.....\$0.35

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

OCTAGON STEEL CHISELS FULLY WARRANTED  
No. 282 Cold Chisel                      No. 288 Cape Chisels



Diam. of steel, in.	1/4	5/16	3/8	1/2	5/8	3/4	7/8	1
Length, in. ....	5 1/4	5 3/4	5 3/4	6	6 3/4	7 1/4	7 3/4	
	\$0.16	.18	.20	.24	.30	.40	.60	.70
Cutting edge is 1/8 in. larger than the size given.								



Cutting edge, in.	3-16	1/4	5/16	3/8	1/2	5/8	3/4	
Price, each .....	\$0.20	.25	.30	.35	.40	.45	.50	
This is absolutely a high grade tool. Head and bevel are polished.								

No. 312 Diamond Point Chisels                      No. 296 Round Nose Chisels



Size of point, in. ....	1/4	5/16	3/8	1/2
Price, each .....	\$0.20	.30	.40	.50



Size of point, in. ....	1/4	5/16	3/8	1/2
Price, each .....	\$0.20	.30	.40	.50

HACK SAW FRAMES

Adjustable



This frame is light, strong in center, can easily be adjusted for blades of any size, from 8 inch to 12 inch. Blade adjusts to four different angles. It is highly polished and very serviceable.

Packed one in a box, adjustable .....\$1.25

Rigid



Frame light, strong, rigid; made for 8, 9, 10 and 12-in. blades. Blades adjust to four different angles.  
Packed one in a box .....\$1.00

Hack Saw Blades



	Per doz.
Length, 8 in., width, 1/2 in. ....	\$0.65
Length, 9 in., width, 1/2 in. ....	.75
Length, 10 in., width, 1/2 in. ....	.85
Length, 12 in., width, 1/2 in. ....	1.00

Power Hack Saw Blades

Are all tempered hard by a special process. The temper is graduated through the body so that just enough elasticity and life is imparted to the saw, making it more serviceable than any other saw on the market.

No.	Length	Width	Teeth per Inch	Price per Doz.
No. 410 .....	12 in.	3/4 in.	14	\$1.65
No. 410 .....	14 in.	3/4 in.	14	2.00

Platinum File



Specially designed for cleaning platinum points and to avoid wasting this costly metal.  
If frequently used the Nicholson "Coil" file will save many dollars in a very short time.  
Price, each .....\$0.30

Magneto File



This magneto file is made of the highest grade English crucible steel. The handle is made of German silver, and with a gas tank key in one end.  
To use the key to best advantage open the file blade, using same for purpose of increased leverage, when necessary.  
The inner edge of the file blade is cut so as to allow its being used to clean out the slot in a screw head, when mutilated.  
Price, each .....\$0.50

File Handles



Spun Ferrules, well made, strong and durable.  
Size  
1. Handle for files, 6 in. and under .....\$0.40  
2. Handle for files, 8 to 10 in. .... .40  
3. Handle for files, 12 to 14 in. .... .50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## FILES



FLAT, BASTARD

Length, Inches.	4		5		6		8		10		12		14	
Price	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.
Flat, Bastard	\$0.20	1.68	\$0.22	\$1.76	\$0.24	\$1.94	\$0.28	\$2.40	\$0.38	\$3.15	\$0.52	\$4.36	\$0.70	\$6.04
Flat, 2d Cut	.22	1.94	.24	2.07	.26	2.16	.32	2.76	.43	3.66	.58	4.95	.81	6.90
Flat, Smooth	.24	2.12	.26	2.22	.28	2.40	.36	2.97	.46	3.92	.63	5.45	.88	7.50



MILL

Length, Inches.	4		5		6		8		10		12		14	
Price	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.
Mill, Bastard	\$0.16	\$1.35	\$0.18	\$1.44	\$0.20	\$1.58	\$0.23	\$1.94	\$0.30	\$2.52	\$0.40	\$3.38	\$0.56	\$4.82



HALF ROUND

Length, Inches.	4		5		6		8		10		12		14	
Price	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.
Half Round, Bastard	\$0.25	\$2.16	\$0.28	\$2.42	\$0.32	\$2.76	\$0.40	\$3.38	\$0.48	\$4.10	\$0.62	\$5.30	\$0.80	\$7.00
Half Round, 2d Cut	.28	2.52	.32	2.76	.36	3.02	.42	3.74	.54	4.56	.68	5.85	.90	7.65
Half Round, Smooth	.32	2.76	.34	2.88	.38	3.20	.48	4.00	.58	4.82	.74	6.26	.98	8.24



WARDING (Key File)

Length, Inches.	4		5		6		8		10	
Price	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.
Warding, Bastard	\$0.21	\$1.80	\$0.25	\$2.02	\$0.27	\$2.20	\$0.34	\$2.88	\$0.42	\$3.68
Warding, 2d Cut	.25	2.16	.28	2.40	.30	2.66	.38	3.38	.54	4.56
Warding, Smooth	.28	2.42	.32	2.60	.34	2.88	.42	3.68	.60	4.95



ROUND

Length, Inches.	4		5		6		8		10		12		14	
Price	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.
Round, Bastard	\$0.16	\$1.35	\$0.18	\$1.44	\$0.18	\$1.58	\$0.23	\$1.94	\$0.28	\$2.52	\$0.40	\$3.38	\$0.56	\$4.82
Round, 2d Cut	.18	1.58	.20	1.70	.21	1.80	.27	2.20	.34	2.88	.45	3.86	.64	5.48
Round, Smooth	.21	1.76	.23	1.86	.25	2.02	.28	2.42	.38	3.15	.50	4.22	.68	5.90



SQUARE

Length, Inches.	4		5		6		8		10		12		14	
Price	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.
Square, Bastard	\$0.21	\$1.70	\$0.23	\$1.84	\$0.25	\$2.06	\$0.30	\$2.48	\$0.40	\$3.38	\$0.54	\$4.58	\$0.74	\$6.26
Square, 2d Cut	.25	2.06	.27	2.16	.28	2.30	.34	2.84	.45	3.84	.60	5.18	.84	7.24
Square, Smooth	.27	2.20	.28	2.38	.30	2.48	.38	3.15	.48	4.10	.68	5.76	.92	7.88

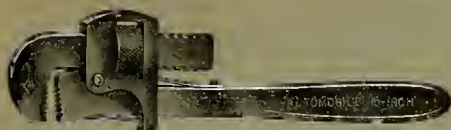


SLIM TAPERS (Key File)

Length, Inches.	3		3½		4		4½		5		6		8	
Price	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.	EA.	DOZ.
Slim Tapers, Single Cut	\$0.12	\$0.96	\$0.12	\$0.96	\$0.12	\$0.98	\$0.12	\$1.08	\$0.14	\$1.16	\$0.18	\$1.52	\$0.30	\$2.42

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## Stillson Wrench



Size	6 in.	8 in.	10 in.	14 in.	18 in.
Each	\$2.00	\$2.25	\$2.50	\$3.50	\$5.00

Adjustable All-steel Pipe wrench. With double spring; drop forged jaws; has no equal for strength and durability. All wrenches over 14 inch furnished with steel handles.

## Monkey Wrench



Size	6 in.	8 in.	10 in.	12 in.	15 in.	18 in.
Each	\$1.00	\$1.25	\$1.50	\$1.75	\$2.25	\$3.00

### Knife Handle

Especially adapted for mechanics' use; no pains have been spared in construction; all parts made from best material and accurately fitted; finished in black.

## B. & S. Adjustable "S" Wrench



Embodies all the advantages of a solid machine wrench together with the convenience of an adjustable wrench.

Every part is drop forged and the sliding jaw is fitted in a double groove which greatly adds to the strength of the tool. The thumb screw securely locks the nut when the wrench has been adjusted to the opening desired.

Price, 6 in., each	\$0.85
Price, 8 in., each	1.00
Price, 10 in., each	1.50

## Hexjaw Adjustable Wrench



It is especially useful for engineers, machinists, or general shop use. Will fit hexagon and square head nuts.

6 inch, capacity	¾ inch.	Price each	\$0.65
8 inch, capacity	1½ inch.	Price each	.80
10 inch, capacity	1¾ inch.	Price each	1.00

## B. & S. Adjustable Automobile



Size 6 ins., opens	1 11-16 ins.	Each	\$0.75
Size 8 ins., opens	1½ ins.	Each	1.00
Size 10 ins., opens	2 ins.	Each	1.50
Size 12 ins., opens	2¾ ins.	Each	2.00
Size 14 ins., opens	2½ ins.	Each	2.50
Size 18 ins., opens	3 ins.	Each	3.00

All case hardened drop forged throughout.

## B. & S. Adjustable Wrench



Drop forged from bar steel. Finished in black. Sliding bar graduated to 32nds of an inch, with oval edges.

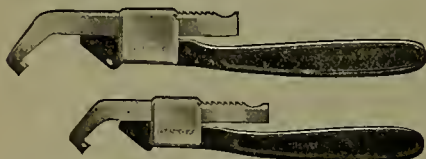
	Length closed	Open	Weight oz.	Price
Model D	6 in.	1½ in.	11¼	\$0.85
Model E	7 in.	1¾ in.	19	1.00
Model E, with jaws,				1.35

## B. & S. Model 97



Drop forged from bar steel, carefully hardened. Blued. Price, each \$0.55

## Adjustable Spanner Wrench



Drop forged of the best steel for the purpose, strap polished and case hardened.

	Takes Circle	Length of Wrench	Price
No. 2	1½ to 4 in.	10¼ in.	\$0.85
No. 3	2 to 5 in.	11½ in.	1.25

## K - 7



The shank is drop forged from high-grade steel. The movable jaw is solid steel, and both jaws are tempered, preventing the edges from being battered or worn off, and making them extremely durable; 8 inches long. Opens 1¾ inches. Mottled finish. Price, each \$0.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

**LITTLE ROADSTER KIT, 9 PIECES**

We maintain the same high quality of tools in this kit as in all of our other kits.

Consists of the Following Tools.

- No. 23. Unfinished 15 deg. angle drop forged wrench.  
 No. 25. Unfinished 15 deg. angle drop forged wrench.  
 No. 29. Unfinished 15 deg. angle drop forged wrench.  
 9 in. Black Monkey Wrench.  
 4 in. Round Shank Screw Driver.  
 1/4 in. Solid Punch, 1/4 in. point.  
 3/4 in. Cold Chisel.  
 6 in. Black Combination Pliers.  
 8 oz. Machinists' Ball Pein Hammer.  
 Little Roadster Kit. Price, complete.....\$2.50

**TAXI KIT, 14 PIECES**

Consists of the Following Tools:

- No. 23. Unfinished 15 deg. Drop Forged Wrench.  
 No. 25. Unfinished 15 deg. Drop Forged Wrench.  
 No. 29. Unfinished 15 deg. Drop Forged Wrench.  
 9 in. Black Monkey Wrench.  
 4 in. Square Shank Screw Driver.  
 6 in. Flat File and Handle.  
 6 in. Black Combination Pliers.  
 1/4 in. Solid Punch, 1/4 in. point.  
 3/4 in. Cold Chisel.  
 5-16 in. Cotter Pin Extractor.  
 Box Assorted Cotter Pins.  
 10 oz. Ball Pein Hammer.  
 Taxi Kit. Price, complete.....\$3.00

**TOURIST KIT, 20 PIECES**

This assortment is used by the majority of the medium priced car manufacturers and contains an assortment that appeals to the prospective buyer who will do most of his own repair work. All high grade tools.

Consists of the Following Tools:

- No. 23. S. F. 15 deg. Angle Drop Forged Wrench.  
 No. 25. S. F. 15 deg. Angle Drop Forged Wrench.  
 No. 27. S. F. 15 deg. Angle Drop Forged Wrench.  
 No. 29. S. F. 15 deg. Angle Drop Forged Wrench.  
 Single Jaw Wrench, 9 in. Mottled Monkey Wrench.  
 3 in. Round Shank Screw Driver.  
 5 in. Square Shank Screw Driver.  
 9 in. Machinists' All Steel Screw Driver.  
 7 in. Flat File. File Handle.  
 6 in. Mottled Combination Pliers.  
 3/4 in. Solid Punch, 3/4 in. Point, 3/4 in. Center Punch.  
 1/2 in. Cold Chisel. 1/2 in. Cape Chisel.  
 5-16 in. Cotter Pin Extractor.  
 8 oz. Machinists' Ball Pein Hammer.  
 No. 1 Machinists' Bearing Scraper.  
 Box Assorted Cotter Pins.  
 Tourist Kit. Price, complete.....\$6.00

**TOOL KITS****GARAGE KIT, 30 PIECES**

A Mechanics' Kit—containing an assortment of necessary tools for general repair work.

The case is of heavy brown duck and has adjustable webbing retaining straps.

Consists of the Following Tools:

- No. 25. S. F. 15 deg. Angle Drop Forged Wrench.  
 No. 725. S. F. 15 deg. Angle Drop Forged Wrench.  
 No. 731A. S. F. 15 deg. Angle Drop Forged Wrench.  
 9 in. Mottled Auto Wrench.  
 5 in. Nickel Plated Bicycle Wrench.  
 3/4 in. Spark Plug Wrench.  
 4 in. Nickel Plated Pliers.  
 6 in. Mottled Combination Pliers.  
 5 in. Square Shank Screw Driver.  
 6 in. Flat File. 8 in. Round File.  
 8 in. Half Round File. File Handle.  
 3/4 in. Centre Punch. 3/4 in. Prick Punch.  
 3/4 in. Solid Punch, 3-32 in. Point.  
 3/4 in. Solid Punch, 3-16 in. Point.  
 3/4 in. Drift Punch, 3/4 in. Point.  
 3/4 in. Cold Chisel. 7-16 in. Cold Chisel.  
 3/4 in. Cape Chisel.  
 3/4 in. Cape Chisel.  
 5-16 in. Black Cotter Pin Extractor.  
 5 in. Offset Screw Driver.  
 Sheet Emery Cloth.  
 Bundle No. 15 Copper Wire.  
 No. 1 Bearing Scraper.  
 10 oz. Machinists' Ball Pein Hammer.  
 Spark Plug Brush.  
 Garage Kit. Price, complete.....\$8.50

**MOTORIST KIT, 30 PIECES**

An excellent kit, containing all tools necessary for making ordinary repairs. All tools fully warranted. Case is heavy waterproof canvas. We recommend this kit to the automobile owners.

Consists of the Following Tools:

- No. 23. S. F. 15 deg. Angle Drop Forged Wrench.  
 No. 25. S. F. 15 deg. Angle Drop Forged Wrench.  
 No. 27. S. F. 15 deg. Angle Drop Forged Wrench.  
 No. 31. S. F. 15 deg. Angle Drop Forged Wrench.  
 10 in. Stillson Pipe Wrench.  
 9 in. Mottled Monkey Wrench.  
 Double Jaw "Ever Ready" Wrench.  
 3 in. Round Shank Screw Driver.  
 5 in. Round Shank Screw Driver.  
 9 in. Machinists' All Steel Screw Driver.  
 6 in. Offset Drop Forged Screw Driver.  
 6 in. Mottled Combination Pliers.  
 3/4 in. Solid Punch, 3/4 in. Point.  
 3/4 in. Center Punch. 3/4 in. Cold Chisel.  
 1/2 in. Cold Chisel. 1/2 in. Cape Chisel.  
 5-16 in. Cotter Pin Extractor.  
 No. 1 Machinists' Bearing Scraper.  
 8 oz. Machinists' Ball Pein Hammer.  
 File Handle. 8 in. Round File.  
 8 in. Flat File. 6 in. Three Corner File.  
 6 in. Side Cutting Pliers.  
 5 in. Black Bicycle Wrench.  
 Spark Plug Socket Wrench. Bundle 20 Copper Wire.  
 Bundle No. 15 Copper Wire. Box Assorted Cotter Pins.  
 Wrenches with A. L. A. M. Standard Openings can be furnished in this kit if preferred.  
 Motorist Kit. Price, complete.....\$9.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



# WALDEN WRENCHES AND WRENCH SETS



752

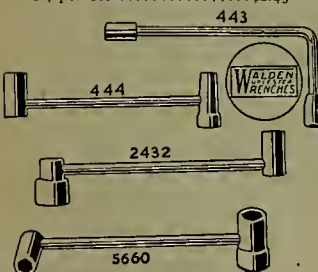
OFFSET SOCKET WRENCH

LONG SHANK TEE HANDLE

NO. 75. These wrenches have been specially designed to fit Overland Models. A few of the nuts, screws and bolts of the different parts which these five wrenches fit are as follows: Cylinder head, wheel flange, connecting rods, rocker arm bracket, wrist pin clamp, main bearing flange and clamp, exhaust and water manifold, propeller shaft and housing, oil pump, emergency hand brake lever sector, cylinder reduction gear case, oil filler breather pipe, differential cover, small cap screw on side and differential plates, body bolts and steering column bracket.

**751** Double Socket Wrench, sizes  $\frac{5}{8}$  in. and  $25-32$  in.  
**752** Double Socket L Wrench, sizes  $9-16$  in. and  $11-16$  in.  
**755** Double Socket L Wrench with socket sizes  $\frac{5}{8}$  in. and  $\frac{3}{4}$  in.  
**756** Double Socket L Wrench, socket sizes  $\frac{1}{2}$  in. and  $7-16$  in.

Price, per set .....\$2.45



## No. 44 SET BUICK CAR

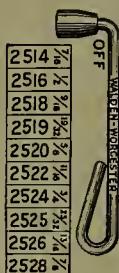
These four wrenches have been designed to cover Buick Models.

A few of the most important places are as follows: connecting rods, differential to main housing screws, steering arm, motor arm bolts, front spring shackle bolts, spoke bolts, connecting rod nuts, and housing cover cap screws.

**443** Double socket L wrench, socket sizes  $\frac{5}{8}$  in. and  $\frac{1}{2}$  in.  
**444** Triple socket offset wrench, socket sizes  $\frac{1}{2}$  in.,  $9-16$  in. and  $\frac{5}{8}$  in.

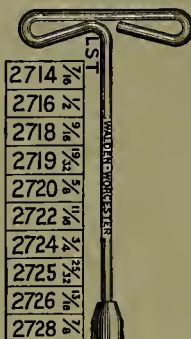
**2432** Double socket offset wrench, socket sizes  $1$  in. and  $\frac{3}{4}$  in.  
**5660** Triple socket offset wrench, socket sizes  $11-16$  in.,  $\frac{7}{8}$  in. and  $15-16$  in.

Price, per set .....\$3.30



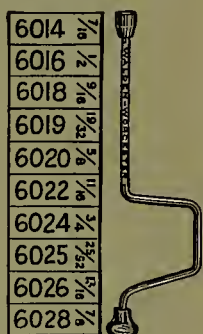
Tin handle, all sizes.  
 Price, each .....\$0.45

## SPEED WRENCHES



Long Shank Brace Sockets are used as speed tools in assembling and dismantling cars. Big time savers. All sizes.

Price, each .....\$0.80



6 in. handle, 12 in. shank. All sizes.

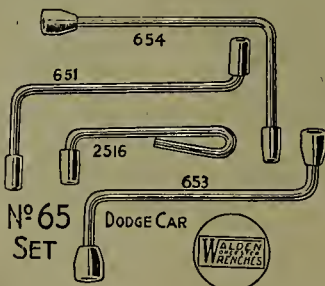
Price, each .....\$0.55

## SHORT SHANK TEE HANDLE



6 in. handle, 6 in. shank.

Price, each .....\$0.50



## No. 65 SET DODGE CAR

## NO. 65 SET

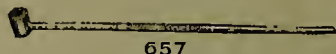
NO. 65 SET has been designed to fit Dodge cars. Will fit a majority of bolts and nuts on this car. Consists of the following wrenches: No. 651 Double Socket,  $7/16$ ,  $9/16$ ; No. 2516 Loop Handle Offset,  $\frac{1}{2}$ ; No. 653 Double Socket,  $\frac{7}{8}$ ,  $\frac{3}{4}$ ; No. 654 Double Socket,  $\frac{1}{2}$ ,  $11/16$ .

Price, per set .....\$2.45

## KING BOLT WRENCH FOR DODGE CAR

Designed to remove the troublesome Dodge king bolt. Is a great time saver, as it sometimes takes hours to remove this.

Price, each .....\$2.50



657

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## WRENCH DISPLAY AND STOCK SETS

No. 30

WALDEN

No. 180



The No. 30 Garage Service Set was designed after a careful study of garage service, each serving a specific purpose and having the qualities necessary for thoroughly good work.

These 30 wrenches, some with two sockets, are equivalent to 39 different sizes and types, as follows: 13 offset wrenches, 10 speed wrenches, 6 L wrenches, 5 special wrenches, 3 demountable rim wrenches and 2 tee handle wrenches.

The combination was made to fit all popular makes of cars, to work wherever particular type wrenches are necessary. Every condition that makes for economy and time saving has been anticipated, and utility provided for. You will have every wrench you need and your tools will be standardized.

Price, complete .....\$22.00

The No. 180 Display and Stock Set consists of 180 wrenches and a handsome display board.

Display is a big factor in business. Customers see articles, tools or devices, judge value and utility from their standpoints and select what they know will best serve them, saving time for your clerks, getting just what they want and being fully satisfied.

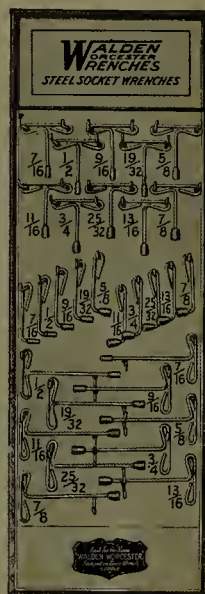
Contrast this with making inquiry, waiting until a clerk finds what is sought, and possibly examining 2 or 3 articles before the right one is found.

Set contains three types of wrenches, ten sizes of each type, six wrenches of each size as follows: 60 offset wrenches, 60 SS tee wrenches, 60 LS tee wrenches. Complete with display board.

Price .....\$90.00

Board crated, 50 lbs. Wrenches boxed, 203 lbs.

Size of Board, 6 ft. x 2 ft.



SENIOR

WILLIAMS

SILENT SALESMAN

JUNIOR



Williams Open End Wrenches are too well known to need much description. Wrenches are of the very best quality, are semi-finished, milled forgings, case hardened, black lacquered and have heads ground bright.

Silent Salesman Sr. is 90 inches high and contains 6 wrenches each of 42 sizes and classes, or 252 wrenches in all, as follows: 30 single head engineers' wrenches, Nos. 1, 3, 5, 7 and 8; 30 double head engineers' wrenches, Nos. 23, 27, 31, 35 and 37; 54 light cap screw wrenches, Nos. 721, 723, 725, 725B, 727, 729, 731, 733 and 737; 30 light service S wrenches, Nos. 675B, 677B, 679, 681B, 683B. 24 S wrenches, Nos. 663E, 663G, 665E and 666E; 36 S wrenches, Nos. 661D, 661E, 661F, 662D, 662F, 662G; 42 double head engineers' wrenches, Nos. 725, 25, 27C, 28S, 731A, 34, 736; and two each of the following spark plug wrenches: 993, 993A and 994.

This assortment covers almost any size U. S. S., S. A. E., A. L. A. M. nuts or hex head cap screws and will take care of any requirements in the line of open end wrenches for automotive purposes.

Price .....\$110.88

Silent Salesman Jr. is 54 inches high and contains 6 wrenches each of 16 sizes and classes, or 96 wrenches in all, assorted as follows: 24 S wrenches, Nos. 661A, 662B, 663C, 664B; 36 engineers' wrenches, Nos. 725, 27C, 28, 729, 34 and 736; 30 light service S wrenches, Nos. 677S, 679S, 681A, 683A and 685C and two each of the following spark plug wrenches, Nos. 993, 993A, 994.

This assortment is a smaller and more conservative stock than the Senior Board and is more suited to the smaller dealer. The wrenches are the most salable sizes and are so divided as to give the dealer a small stock, yet one that will take care of the majority of his wrench requirements.

Price .....\$48.06



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# WILLIAMS DROP FORGED WRENCHES

## Engineers Wrenches, 15° Angle Double Head for Hexagon Nuts, Etc.

In Stock with openings for U. S. Standard Finished Nuts; A. L. A. M. Standard.



No.	For U. S. Standard Nuts; Size Bolts	Openings Milled	Extreme Length	Thickness Heads	PRICE Semi-Finished
21	3-16 & 3-16	5-16 & 13-32	3 1/4	5-32 & 3-16	\$0.17
22	1/8 & 1/4	5-16 & 1/2	4	5-32 & 1/4	.21
23	3-16 & 1/4	13-32 & 1/2	4	3-16 & 1/4	.21
24	3-16 & 5-16	13-32 & 19-32	4 1/2	3-16 & 9-32	.25
25	1/4 & 5-16	1/2 & 19-32	4 1/2	1/4 & 9-32	.25
26	1/4 & 3/8	1/2 & 11-16	5 1/2	1/4 & 5-16	.31
27	5-16 & 7-16	19-32 & 25-32	5 1/2	9-32 & 5-16	.31
28	5-16 & 7-16	11-16 & 25-32	6 1/2	9-32 & 11-32	.37
29	3/8 & 7-16	11-16 & 1/2	7 1/4	5-16 & 11-32	.37
30	3/8 & 1/2	11-16 & 1/2	7 1/4	5-16 & 13-32	.45
31	7-16 & 1/2	25-32 & 1/2	7 1/4	11-32 & 13-32	.45
32	7-16 & 9-16	25-32 & 31-32	8 1/4	11-32 & 7-16	.55
33	1/2 & 9-16	1/2 & 31-32	8 1/4	13-32 & 7-16	.55
34	1/2 & 3/4	3/8 & 1 1-16	9 1/4	13-32 & 1/2	.68
35	9-16 & 3/4	31-32 & 1 1-16	9 1/4	7-16 & 1/2	.68
36	9-16 & 3/4	31-32 & 1 1/4	11 1/2	7-16 & 9-16	.96
37	3/4 & 3/4	1 1-16 & 1 1/4	11 1/2	1/2 & 9-16	.96
38	3/4 & 3/4	1 1-16 & 1 7-16	13 1/2	1/2 & 21-32	1.40
39	3/4 & 3/4	1 1/4 & 1 7-16	13 1/2	9-16 & 21-32	1.40
40	3/4 & 1	1 1/4 & 1 1/2	15 1/2	9-16 & 3/4	1.90

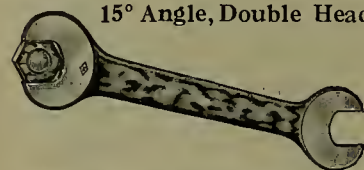


## Engineers Wrenches, 15° Angle Double Head for Hexagon Cap Screws, Etc.

In Stock with openings for Standard Hexagon Head Cap Screws. A. L. A. M. Standard and larger or special sizes to order.

No.	For Hexagon Head Cap Screws Diam. Screws	Openings Milled	Extreme Length	Thickness Heads	Price Semi-Finished
721	3/8 & 3-16	1/8 & 3/8	3 1/4	5-32 & 3-16	\$0.17
722	1/2 & 1/4	1/4 & 1/2	4	5-32 & 1/4	.21
723	3-16 & 1/4	1/8 & 1/2	4	3-16 & 1/4	.21
723A	3-16 & 1/8	1/8 & 1/2	4	3-16 & 1/4	.25
725	1/4 & 1/8	1/8 & 1/2	4 1/2	1/4 & 9-32	.25
725A	1/4 & 1/8	1/8 & 1/2	4 1/2	1/4 & 9-32	.28
725B	1/4 & 1/8	1/8 & 1/2	4 1/2	1/4 & 9-32	.31
726	1/2 & 1/8	1/8 & 3/8	5 1/2	1/2 & 1/2	.31
727	1/2 & 1/8	1/8 & 3/8	5 1/2	9-32 & 1/2	.37
728	3/8 & 1/2	1/8 & 3/4	6 1/2	9-32 & 11-32	.37
729	3/8 & 1/2	1/8 & 3/4	6 1/2	1/2 & 11-32	.45
730	1/2 & 1/2	3/8 & 13-16	7 1/4	1/2 & 13-32	.45
731	1/2 & 1/2	3/4 & 13-16	7 1/4	11-32 & 13-32	.50
731A	1/2 & 1/2	3/4 & 1/2	7 1/4	11-32 & 13-32	.50
731B	1/2 & 1/2	13-16 & 1/2	7 1/4	11-32 & 13-32	.55
732	1/2 & 3/4	13-16 & 1	8 1/4	11-32 & 1/2	.55
733	1/2 & 3/4	1/2 & 1	8 1/4	13-32 & 1/2	.68
734	3/4 & 3/4	1/2 & 1 1/4	9 1/4	13-32 & 1/2	.68
735	3/4 & 3/4	1 & 1 1/4	9 1/4	1/2 & 1/2	.96
736	3/4 & 1	1 & 1 1/4	11 1/2	1/2 & 1/2	.96

## "Thin" Wrenches 15° Angle, Double Head



For Check, Jam or Lock Nuts

Number	For U. S. Standard Nuts; Size Bolts	Openings Milled	Extreme Length	Thickness Heads	Price Semi-Finished
623	3-16 & 1/4	13-32 & 1/2	4 1/2	9-64 & 5-32	\$0.25
625	1/4 & 1/4	1/2 & 19-32	4 1/2	9-64 & 5-32	.25
627	1/8 & 3/8	19-32 & 11-16	5 1/2	5-32 & 3-16	.32
629	3/8 & 7-16	11-16 & 25-32	6 1/2	3-16 & 7-32	.40
631	7-16 & 1/2	25-32 & 1/2	6 1/2	3-16 & 7-32	.40
633	1/2 & 1/2	1/2 & 31-32	8 1/2	7-32 & 9-32	.56
635	3/8 & 3/8	31-32 & 1 1-16	10 1/4	9-32 & 5-16	.84
637	3/8 & 3/8	1 1-16 & 1 1/4	10 1/4	9-32 & 5-16	.84

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## WILLIAMS' END WRENCHES IN SETS

## "Big Ten" Set

This excellent "Extra Capacity" set with capacity for 78 sizes of most prominent Nut, Screw and Set-Screw Sizes in the U. S. and other Standard millings, provides for the maximum of service in the machine-shop and mechanical field generally—maximum service-guaranteed tools.



Num. per Set	For U. S. Standard.		For A. L. A. M. Std. Nuts & Cap Screws.	For S. A. E. Std. Nuts & Cap Screws.	For Set Screws	Openings Milled	PRICE
	For Nuts Diam.	For Cap Screws Diam.					
721	3-16	3-16	3-16		1/8 & 3/8	5-16 & 3/4	\$0.17
23	3-16	3/4	5-16		1/8 & 3/8	13-32 & 1/2	.21
725A		3/4	3/4	3/4 & 1	1/8 & 3/8	7-16 & 9-16	.25
service-guaranteed tools.							
27	5-16	3/4				19-32 & 11-16	.31
729		7-16	1/2	1/2 & 3/4	3/8 & 1/2	3/4 & 3/4	.37
731B		1/2	1/2	9-16	1/8	13-16 & 3/4	.45
32	1/2					25-32 & 31-32	.55
33C		3/4	3/4 & 11-16	3/4 & 11-16	1	15-16 & 1	.55
737	3/4	3/4	1	3/4 & 1	3/4	1 1/8 & 1 1/4	.96
38	3/4	3/4	1	3/4 & 1	1	1 1-16 & 1 1/8	1.40
Set 10. List Price of Roll, \$0.45 extra.....							5.22

## "Duplex" Set No. 9

With Openings for Popular Combinations of U. S. Std. Nuts and Cap Screws

Screws					
No.	U. S. Std. Nuts and Cap Screws	Openings Milled U. S. Standard	Extreme Length	Thickness Heads	Price Semi-Finished
725	¼ & ¾	7-16 & ½	4 ½	¼ & 9-32	\$0.25
25	5-16 & 5-16	½ & 19-32	4 ½	¼ & 9-32	.25
27C	¾ & ¾	9-16 & 11-16	5 ½	9-32 & 5-16	.31
28S	7-16 & 7-16	¾ & 25-32	6 ½	9-32 & 11-32	.37
731A	½ & ¾	¾ & ¾	7 ½	11-32 & 13-32	.45
34	¾ & ¾	¾ & 1 1-16	9 ¾	13-32 & ½	.68
736	¾ & ¾	1 & 1 ¼	11 ½	7-16 & 9-16	.96
No. 9.	Set. List Price of Roll, \$0.45 extra				3.25

## "Extra Capacity" Set, "Thin Six" No. 34

With Openings for Most Popular U. S. Standard Nuts and Cap Screws

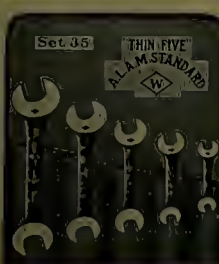
Nuts		Cap Screws		Openings Milled	Extreme Length	Thickness Heads	Price Semi- Finished
No.	Small H'd	Large H'd	Small H'd				
623D		3/4	1/4	7-16 & 1/2	4 3/4	9-64 & 5-32	\$0.25
626X		3/4	3/4	9-16 & 11-16	5 3/4	5-32 & 3-16	.32
628	1/2	1/2		19-32 & 25-32	5 1/4	5-32 & 3-16	.32
629D			1/2	3/4 & 3/4	6 3/4	3-16 & 7-32	.40
634	3/4	3/4		3/4 & 1 1-16	8 3/4	7-32 & 9-32	.56
635E		3/4	1	1 & 1 1/4	10 3/4	9-32 & 5-16	.84
No. 34.	Set.	List Price of Roll, \$0.45 extra	..... 2.60				

## Automobile Set, "Thin Five" No. 35

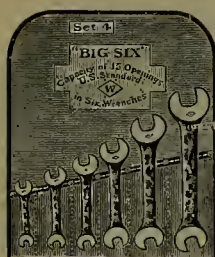
With Openings Milled for A. L. A. M. Standard Nuts and Cap Screws

A. L. A. M.					
No.	Nuts and Cap Screws	Openings Milled	Extreme Length	Thickness Heads	Price Semi-Finished
623E	$\frac{1}{4}$ & 5-16	$\frac{3}{4}$ & $\frac{1}{2}$	4 $\frac{1}{2}$	9-64 & 5-32	\$0.25
626X	$\frac{3}{8}$ & 7-16	9-16 & 11-16	5 $\frac{1}{2}$	5-32 & 3-16	.32
629E	$\frac{1}{2}$ & 9-16	$\frac{3}{4}$ & $\frac{1}{2}$	6 $\frac{1}{2}$	3-16 & 7-32	.40
632X	$\frac{3}{4}$ & 11-16	15-16 & 1	8 $\frac{1}{2}$	7-32 & 9-32	.56
635G	$\frac{3}{4}$ & $\frac{1}{2}$	1 $\frac{1}{4}$ & 1 $\frac{1}{2}$	10 $\frac{1}{2}$	9-32 & 5-16	.84
No. 35.	Set. List	Price of Roll, \$0.45 extra	..... 2.37		

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.







## Original "Extra Capacity" Set, "Big Six," No. 4

With Openings milled for Most Popular U. S. Standard Nuts and Cap Screws For Severe Service

No.	For Nuts Diam. Bolts Small Large Head Head	For Cap Screws Diam. Screw Small Large Head Head	Openings Milled U. S. Standard	Extreme Length	Thickness Heads	Price Semi- Finished
725	$\frac{1}{4}$	$\frac{1}{4}$	7-16 & $\frac{1}{2}$	4 7/8	9-32	\$0.27
27C	$\frac{3}{8}$	$\frac{3}{8}$	9-16 & 11-16	5 7/8	5-16	.31
28	$\frac{1}{2}$	$\frac{1}{2}$	19-32 & 25-32	6 7/8	11-32	.37
729	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{1}{2}$ & $\frac{3}{4}$	6 7/8	11-32	.37
34	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{3}{4}$ & 1 1-16	7 3/4	$\frac{1}{2}$	.68
736	$\frac{3}{4}$	1	1 & 1 1/4	11 1/2	9-16	.96

Set No. 4. Price of Roll, \$0.45 extra .....\$2.96



## A. L. A. M. or S. A. E. Standard (Automobile) Set, No. 2-S

With Openings for Recently Adopted Automobile Nut and Cap Screw Sizes

No.	For S. A. E. Standard Nuts	Openings Milled	Extreme Length	Thickness- Heads	Price Semi- Finished
677S	$\frac{1}{4}$ & 5-16	7-16 & $\frac{1}{2}$	7 1/2	7-32	\$0.34
679S	$\frac{3}{8}$ & 7-16	9-16 & $\frac{3}{8}$	8 1/4	5-16	.43
681A	$\frac{1}{2}$ & 9-16	$\frac{1}{2}$ & $\frac{3}{4}$	9 1/4	$\frac{1}{2}$	.55
683A	$\frac{3}{4}$ & 11-16	15-16 & 1	10 3/4	7-16	.70
685C	$\frac{1}{2}$ & $\frac{3}{4}$	1 1-16 & 1 1/4	12	$\frac{1}{2}$	1.00

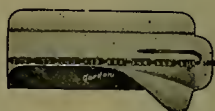
Set No. 2S. Price of Roll, \$0.45 extra .....\$3.02

## Combination Wrench Set



Light, simple, compact and strong. Nine wrenches in one.  
Each .....\$1.00

## Tool Roll



These tool rolls keep the tools in a neat, compact manner, each tool in its place, where it can be found. The tool roll is a necessity even when a tool box is used, as in a tool box the tools are thrown in together and small or pointed tools are damaged, besides being difficult to find.

Brown duck for 24 tools.  
Price, each .....\$1.75  
Brown duck for 12 tools.  
Price, each .....\$1.20

## Extra Sockets

HEXAGON SOCKET—5-16 in., 11-32 in.,  $\frac{3}{4}$  in., 13-32 in., 7-16 in., 15-32 in.,  $\frac{1}{2}$  in., 17-32 in., 9-16 in., 19-32 in.,  $\frac{5}{8}$  in., 21-32 in., 11-16 in., 23-32 in.,  $\frac{3}{4}$  in., 25-32 in., 13-16 in., 27-32 in.,  $\frac{3}{4}$  in., 29-32 in., 15-16 in., 31-32 in., 1 in., 1 1-32 in., 1 3-32 in., 1 5-32 in., 1 9-32 in.

Price each .....\$0.50

SPARK PLUG SOCKET—29-32 in., hexagon 4 in. long.  
Price each .....\$0.50

SQUARE SOCKETS—13-32 in., 17-32 in., 21-32 in.  
Price each .....\$0.50

Large Set contains all square sockets, spark plug socket and all Hex Sockets.

Small Set contains all square sockets, spark plug socket and Hex sockets indicated in Bold Face in dimensions given above in Hex. Sockets.



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



**"Auto Cle" Socket Wrench Set**

The large set consists of a swivel or universal attachment, long and short extension rod, socket for removing the sparking plug, and two sizes of screw drivers.

The large set has 31 sizes of sockets. These range in sizes from 5-16 hexagon to 1 9-32 hexagon, and also include the necessary square sockets.

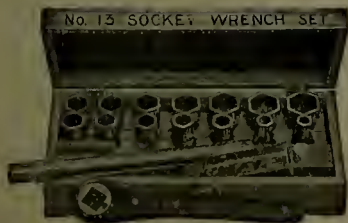
Furnished in a wooden box fitted with pegs on which to place the sockets, thus insuring all sockets being kept in place and available for instant use.

Is especially valuable for construction, shop and repair work, as the sockets will fit any size nut or bolt on any automobile, motor or gas engine.

Large set, each .....\$13.00

The small "Auto Cle" is the same as the large set except it contains only 12 sizes of sockets. Comes in a compact leather case with compartments for sockets.

Small set, each .....\$7.50

**Mossberg Socket Wrench Set**

No. 13

In wooden box containing ratchet socket wrench handle No. 355, extension tube No. 351, 9 1/4 in. long; fifteen mottled, thoroughly hardened, pressed steel guaranteed Hex sockets, fitting standard sizes of screws, nuts and bolts from 13-32 to 13-32 in., and one 29-32 in. Hex spark plug socket, 4 in. long.

Set No. 13 .....\$4.50

**Ratchet Socket Handle No. 355**

Steel construction, finished in dead black.

Length 8 in., each .....\$1.25

**Mossberg Socket Wrench Set**

No. 14

Largest, most complete socket wrench set ever marketed.

On account of the cleverness of the No. 350 Handle in its applications—and the full equipment of this set—the No. 14 set is Mossberg Company's recommendation for all cases where quick work is desired. Every tool is included that is required for work by machinists, automobile repair men and marine engineers.

In wooden box containing:

1 Mossberg Ratchet Wrench No. 350, and extension bar.

1 Mossberg No. 340 Take-down Handle and extension bar.

1 Mossberg No. 320 Offset Socket Wrench.

1 Sterling No. 100 finest Nickle-plated Plier.

1 "Gripsall" Pipe Wrench No. 470.

1 No. 1 General Service Double-End Wrench Set, extra finished, ten different openings.

1 Universal Joint.

3 Special Spark Plug Sockets, sizes 29-32 inch, 1 1-32 inches and 1 5-32 inches.

3 Screw Driver Bits.

1 Cotter Pin Extractor No. 1.

23 sizes, thoroughly hardened and mottled finish Hex. Sockets.

11 sizes, thoroughly hardened and mottled finish Square Sockets.

Set No. 14 .....\$15.50

**The Hexall Ratchet Wrench Set**

Made of the best material; very strong, compact and simple to operate; requiring only a single movement of finger to reverse action of ratchet. Will fit into close quarters where other heavier wrenches are useless.

Any parts proving defective will be replaced. All parts interchangeable. Set complete with 11 pieces—7" handle, steel forging; 2 screw driver bits, tool steel; 6" extension bar, 7 sockets, steel case hardened for bolts and nuts, 3/8"-5/8" inclusive. Put up in neat, strong cloth case. Weight, 13 1/2 lbs.

Price, per set .....\$2.50

Break any Hexall Wrench and we repair it. No charge.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## Mossberg Socket Wrench Set



No. 44

The very latest in Wrench Sets. Packed in wood case containing:

- Ratchet Brace Handle No. 358.
- One Extension Bar,  $9\frac{1}{2}$  in. long, No. 351.
- One Universal Joint No. 336.
- Two Screw Driver Bits.

Twenty-two mottled, properly hardened, pressed steel Sockets, from 15-32 in. to 19-32 in., including 17-32 in. square socket to serve as connection fitting, and two Hex Spark Plug Sockets 29-32 and 15-32 in., 4 in. long.

Set, each .....\$10.00

## Mossberg Socket Wrench



No. 250

Simple construction, first quality steel finished in full nickel plate, 10 inches long.

Each .....\$2.50

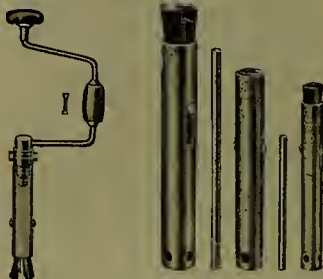


UNIVERSAL OFFSET WRENCHES

Made from seamless steel tubing. Tempered. Ebony finish.

No. Wrench...	50	51	52	53	54	55	56	57
U. S. S. Nut								
Size Bolt .....	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{2}$	$2\frac{1}{2}$	$3\frac{1}{2}$	$4\frac{1}{2}$	$5\frac{1}{2}$
Cap Screw								
Head size of Bolt .....	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{2}$	$2\frac{1}{2}$	$3\frac{1}{2}$	$4\frac{1}{2}$	$5\frac{1}{2}$
S. A. E. Nut								
Size Bolt ....	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{2}$	$2\frac{1}{2}$	$3\frac{1}{2}$	$4\frac{1}{2}$	$5\frac{1}{2}$
Price, ea.....	\$0.40	.50	.60	.70	.80	.90	1.00	1.10
Universal set, containing 8 wrenches in heavy canvas case. Price, per set .....	\$5.00							
Universal Ford set, containing 5 wrenches in heavy canvas case. Price, per set .....	3.50							

## Utility Universal Combination Wrench Set



### A NEW PRINCIPLE WITH MANY ADVANTAGES.

Has all the advantages of socket wrench sets consisting of sixteen sockets. ADJUSTS ITSELF AUTOMATICALLY. No screws to manipulate, or parts to get out of order.

Can be applied to all shapes and kinds of nuts instantly. Is a perfect tool for turning inaccessible gas cocks, drain cocks, pet cocks, wing nuts, thumb screws, caps of oil tanks or plugs of crank cases. Has many new features possessed by no other wrench.

Will take the following hex nuts: 5-16 in.,  $\frac{3}{4}$  in., 7-16 in., 17-32 in.,  $\frac{5}{8}$  in., 23-32 in., 13-16 in.,  $\frac{7}{8}$  in. and all intermediate sizes. Will take the following square nuts:  $\frac{1}{4}$  in., 5-16 in.,  $\frac{3}{8}$  in., 15-32 in., 9-16 in., 21-32 in.,  $\frac{1}{2}$  in., 13-16 in. and all intermediate sizes.

### UTILITY UNIVERSAL WRENCH SET.

Packed in a neat brown canvas bag.  
Complete with handles .....\$3.50

### THE UTILITY UNIVERSAL WRENCH SET AND DETACHABLE BRACE.

This is the most serviceable tool ever made. It consists of the Utility Universal Wrench Set with a special brace. This brace can be instantly attached to any of the three socket wrenches, making it possible to operate them like bit braces. This enables operator to remove any kind of nuts, bolts, etc., no matter how hard they may stick, without injury to them or to the operator.

### UTILITY COMBINATION UNIVERSAL WRENCH SET.

Complete with T handles and brace.....\$4.50

## Hexall Socket Wrench Set



Consists of seven sockets (5-16 in. to  $\frac{5}{8}$  in.) made from bar steel, case hardened. Handle made from  $\frac{1}{2}$  in. hexagon steel. Sockets pack neatly on handle when not in use. Friction ball in handle prevents them from dropping off. Used as an extension with wrench on short end. Weight 21 oz.

Break any Hexall Wrench and we repair it—no charge.  
Set, each .....\$1.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# GOODELL-PRATT HAND AND BREAST DRILLS



No. 20 BREAST DRILL

Breast Plate.—Saddle design, large and heavy, with leather top, adding much to the ease of operating. Chuck.—Three-jawed, well made and nickel-plated, for holding round shanks from 0 to  $\frac{3}{4}$  inch, has two speed and all cut teeth. Side Handle.—Heavy grip pattern, particularly useful on heavy work. Spindle.—Lathe turned, fitted with ball bearings at point shown in cut. Price, each .....\$7.00



No. 6 BREAST DRILL

No. 6 has a three-jawed chuck, capacity 0 to  $\frac{1}{2}$  in. It is double geared, one gear remaining "idle" and acting as an anti-friction bearing when the other is at work. All gears have cut teeth. It has two speeds and can be changed from fast to slow by turning the thumb nut at "A" until the letter representing desired speed is nearest the chuck. The Breast Plate is adjustable and its position can be changed if desired. Price, each .....\$5.50



No. 5 1/2-B HAND AND BREAST DRILL

No. 5 1/2-B. This is a combination hand and breast drill. The shape of the handle admitting of its use the latter way. Strong frame made of malleable iron japanned, with a polished hard wood handle with large head, cut teeth gears. Has two speeds changed by an adjusting nut. Lathe turned spindle, fitted with ball bearings. Three jawed chuck, capacity 0 to  $\frac{3}{4}$  in. knurled, nickel-plated shell; constructed entirely of steel with hardened jaws. Price, each.....\$4.60

Packed one in a box. Price, each.....\$4.60



No. 53 HAND DRILL

No. 53. Three-jawed, capacity 0 to  $\frac{5}{32}$  in., with knurled nickel-plated shell. Length over all 10 inches. Large handle, polished cocobola with screw cap. Small side handle is also made of polished cocobola. Equipment.—Eight fluted drill points from  $\frac{1}{16}$  to  $\frac{11}{64}$  in. furnished with each tool, all contained in handle. Price, each .....\$3.00

Price, each .....\$3.00



No. 54 HAND DRILL

No. 54. Length over all  $11\frac{1}{2}$  inches. Frame.—All steel, polished, and nickel plated. Handles.—Polished hard wood. Gears.—Have cut teeth and are nickel plated to prevent rusting. Chuck.—Three-jawed, capacity 0 to  $\frac{3}{4}$  inch. Equipment.—Eight fluted drill points  $\frac{1}{16}$  to  $\frac{11}{64}$  inch furnished with each tool. Contained in the handle. Price, each .....\$3.30

Price, each .....\$3.30

No. 316 AUTOMATIC CHAIN DRILL

No. 316. This automatic chain drill will be found very useful in connection with a brace or breast drill in places where it is not convenient to use a ratchet drill or, in fact, anywhere that a chain can be passed around for the work.

It does away with the necessity of the operator pushing his drill through the work by main force. The automatic feed pulling against the chain drives the drill. All that is required of the operator is to turn the brace or breast drill. A strong steel three-jawed chuck will securely hold and accurately center any round shank drill from 0 to  $\frac{1}{2}$  inch. Steel spindle is case hardened to prevent damage. The end thrust of the automatic feed is reduced by ball bearings. Equipped with three feet of strong steel chain of special make.

Packed one in a box. Weight 22 pounds. Price, each .....\$3.80

Price, each .....\$3.80

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## DRILLS



## No. 105. STRAIGHT SHANK DRILLS

## Short Series

Diam.	Price Per Doz.	Diam.	Price Per Doz.
1/16 inch.....	\$1.60	19/64 inch.....	\$4.00
5/64 inch.....	1.65	5/16 inch.....	4.35
3/32 inch.....	1.70	21/64 inch.....	4.70
7/64 inch.....	1.75	11/32 inch.....	5.05
1/8 inch.....	1.80	23/64 inch.....	5.50
9/64 inch.....	1.85	3/8 inch.....	6.00
1/4 inch.....	3.50	1/2 inch.....	12.00
11/64 inch.....	2.00	13/32 inch.....	7.00
3/16 inch.....	2.25	27/64 inch.....	7.75
13/64 inch.....	2.50	7/16 inch.....	8.50
7/32 inch.....	2.75	29/64 inch.....	9.25
15/64 inch.....	3.00	15/32 inch.....	10.00
1/4 inch.....	3.25	31/64 inch.....	11.00
5/32 inch.....	1.90	25/64 inch.....	12.00
9/32 inch.....	3.80		

## No. 107 STRAIGHT SHANK DRILLS, WIRE GAUGE

Numbers by Gauge	Price Per Doz.	Numbers by Gauge	Price Per Doz.
1 to 5.....	\$2.75	31 to 35.....	\$1.75
6 to 10.....	2.50	36 to 40.....	1.75
11 to 15.....	2.25	41 to 45.....	1.70
16 to 20.....	2.00	46 to 60.....	1.60
21 to 25.....	1.90	61 to 70.....	1.50
26 to 30.....	1.80	71 to 80.....	1.50

## DRILLS FOR BLACKSMITH'S DRILL PRESSES

## No. 112. 1/2 Inch Shank



Diam.	Price Each	Diam.	Price Each
1/8 inch.....	\$0.50	19/32 inch.....	\$1.25
5/32 inch.....	.55	5/8 inch.....	1.30
3/16 inch.....	.60	21/32 inch.....	1.40
7/32 inch.....	.65	11/16 inch.....	1.50
1/4 inch.....	.70	23/32 inch.....	1.60
9/32 inch.....	.75	3/4 inch.....	1.70
5/16 inch.....	.80	25/32 inch.....	1.80
11/32 inch.....	.85	13/16 inch.....	1.90
3/8 inch.....	.90	27/32 inch.....	2.00
13/32 inch.....	.95	7/8 inch.....	2.10
7/16 inch.....	1.00	29/32 inch.....	2.20
5/32 inch.....	1.05	15/16 inch.....	2.30
1/2 inch.....	1.10	31/32 inch.....	2.40
17/32 inch.....	1.15	1 inch.....	2.50
9/16 inch.....	1.20		

The above drills have shanks 1/2 inch diameter and 3/4 inches long.

## No. 104. TAPER SHANK DRILLS

Diam.	Price Each	Diam.	Price Each
1/8 inch.....	\$0.45	33/64 inch.....	\$1.30
9/64 inch.....	.45	17/32 inch.....	1.30
5/32 inch.....	.45	35/64 inch.....	1.40
11/64 inch.....	.50	9/16 inch.....	1.40
3/16 inch.....	.50	37/64 inch.....	1.50
13/64 inch.....	.55	19/32 inch.....	1.50
7/32 inch.....	.55	39/64 inch.....	1.60
15/64 inch.....	.60	5/8 inch.....	1.60
1/4 inch.....	.60	41/64 inch.....	1.70
17/64 inch.....	.65	21/32 inch.....	1.70
9/32 inch.....	.65	43/64 inch.....	1.80
19/64 inch.....	.70	11/16 inch.....	1.80
5/16 inch.....	.70	45/64 inch.....	1.90
21/64 inch.....	.75	23/32 inch.....	1.90
11/32 inch.....	.75	47/64 inch.....	2.00
23/64 inch.....	.80	3/4 inch.....	2.00
3/8 inch.....	.80	49/64 inch.....	2.10
25/64 inch.....	.90	25/32 inch.....	2.10
13/32 inch.....	.90	51/64 inch.....	2.20
27/64 inch.....	1.00	13/16 inch.....	2.20
7/16 inch.....	1.00	53/64 inch.....	2.40
29/64 inch.....	1.10	27/32 inch.....	2.40
15/32 inch.....	1.10	55/64 inch.....	2.60
31/64 inch.....	1.20	7/8 inch.....	2.60
1/2 inch.....	1.20		



## No. 1041-A. SQUARE SHANK RATCHET DRILLS

Diam.	Price Each	Diam.	Price Each
1/8 inch.....	\$0.90	17/32 inch.....	\$1.35
5/32 inch.....	.95	9/16 inch.....	1.35
3/16 inch.....	.95	19/32 inch.....	1.40
7/32 inch.....	1.00	5/8 inch.....	1.40
1/4 inch.....	1.00	21/32 inch.....	1.45
9/32 inch.....	1.05	11/16 inch.....	1.45
5/16 inch.....	1.10	23/32 inch.....	1.50
11/32 inch.....	1.15	3/4 inch.....	1.55
3/8 inch.....	1.20	25/32 inch.....	1.65
13/32 inch.....	1.25	13/16 inch.....	1.75
7/16 inch.....	1.25	27/32 inch.....	1.90
15/32 inch.....	1.30	7/8 inch.....	12.00
1/2 inch.....	1.30		



## No. 108. METAL OR WOOD DRILL

Diam.	Price Per Doz.	Diam.	Price Per Doz.
1/16 inch.....	\$2.50	11/32 inch.....	\$8.00
5/64 inch.....	2.60	3/8 inch.....	8.50
3/32 inch.....	2.70	13/32 inch.....	9.25
7/64 inch.....	2.85	7/16 inch.....	10.50
1/8 inch.....	3.00	15/32 inch.....	11.75
9/64 inch.....	3.25	1/2 inch.....	13.00
5/32 inch.....	3.50	17/32 inch.....	14.25
11/64 inch.....	3.75	9/16 inch.....	15.50
3/16 inch.....	4.00	19/32 inch.....	16.75
13/64 inch.....	4.25	5/8 inch.....	18.00
7/32 inch.....	4.50	21/32 inch.....	19.50
15/64 inch.....	4.75	11/16 inch.....	21.00
1/4 inch.....	5.00	23/32 inch.....	22.50
17/64 inch.....	5.50	3/4 inch.....	24.00
9/32 inch.....	6.00	25/32 inch.....	25.50
19/64 inch.....	6.50	13/16 inch.....	27.00
5/16 inch.....	7.00	27/32 inch.....	28.50
21/64 inch.....	7.50	7/8 inch.....	30.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## REAMERS AND DRILLS



No. 5. SPECIAL LONG BIT BRACE REAMER

NO. 5. Reamers taper from 0 to  $\frac{1}{4}$  inch, and for all ordinary work will take the place of a complete set up to  $\frac{1}{4}$  inch. These are especially useful in bicycle shops and garages.

Price, each ..... \$1.00  
Price, per dozen ..... 11.00



No. 9½. TAPER PIN REAMERS

These reamers have a taper of  $\frac{1}{4}$  inch per foot and each will overlay the size next smaller. Sizes from 0 to 5. Six reamers packed neatly in a box.  
No. 9½. Price, for set of 6.....\$9.50



HAND REAMER

## Eccentric Flutes

Diameter	Price, each	Diameter	Price, each
1/8	1.00	27/32	3.25
5/32	1.10	7/8	3.40
3/16	1.20	29/32	3.55
7/32	1.30	15/16	3.70
1/4	1.40	31/32	3.85
9/32	1.45	1	4.00
5/16	1.50	1 1/32	4.15
11/32	1.55	1 1/16	4.30
3/8	1.60	1 3/32	4.45
13/32	1.70	1 1/8	4.60
7/16	1.75	1 5/32	4.75
15/32	1.85	1 3/16	4.90
1/2	1.90	1 7/32	5.05
17/32	1.95	1 9/32	5.20
9/16	2.00	1 5/16	5.40
19/32	2.10	1 11/32	5.60
5/8	2.20	1 1/2	5.80
21/32	2.30	1 3/8	6.00
11/16	2.40	1 13/32	6.20
23/32	2.50	1 7/16	6.40
23/32	2.60	1 15/32	
25/32	2.70	1 1/2	
13/16	2.80		



EXPANSION REAMERS

These reamers will not stand more than .010 inch expansion.

Diam.	Length of Flute	Length Over All	Price Each
3/8	2 1/2	4 1/4	\$3.20
13/32	2 7/16	4 3/8	3.25
7/16	2 33/64	4 1/2	3.30
15/32	2 33/64	4 3/4	3.35
1/2	2 33/64	5	3.40
17/32	2 5/8	5 3/16	3.50
9/16	2 3/4	5 3/8	3.65
19/32	2 7/8	5 9/16	3.80
5/8	3 1/8	5 3/4	4.00
21/32	3 5/16	6	4.20
11/16	3 1/2	6 1/4	4.40
23/32	3 9/16	6 7/16	4.60
3/4	3 5/8	6 5/8	4.80
25/32	3 13/16	6 7/8	5.00
13/16	4	7 1/8	5.25
27/32	4 3/16	7 3/8	5.50
7/8	4 5/16	7 9/16	5.75
29/32	4 7/16	7 13/16	6.00
15/16	4 9/16	8 1/16	6.25
31/32	4 3/4	8 9/32	Prices on Appl'n
1 1/32	4 7/8	8 1/2	Prices on Appl'n
1 1/16	5	8 3/4	Prices on Appl'n
1 1/8	5 1/8	9	Prices on Appl'n
1 3/32	5 3/16	9 1/8	Prices on Appl'n
1 1/8	5 1/4	9 1/4	Prices on Appl'n
1 5/32	5 5/16	9 13/32	Prices on Appl'n
1 3/16	5 3/8	9 9/16	Prices on Appl'n
1 7/32	5 7/16	9 23/32	Prices on Appl'n
1 1/4	5 1/2	9 7/8	Prices on Appl'n



STANDARD TAPER PIN REAMERS

Tapering 1/4 in. per foot.

Size	Diameter of Shank, ins.	Length of Flute, ins.	Price, Each
0	0.125	1 1/2	\$1.00
1	0.140	1 3/4	1.00
2	0.162	2	1.25
3	0.183	2 1/4	1.50
4	0.208	2 1/2	1.75
5	0.240	3	2.00
6	0.270	3 3/8	2.25
7	0.311	4 1/2	2.50
8	0.308	5 1/4	3.00
9	0.482	6 3/8	3.50
10	0.581	7	4.50

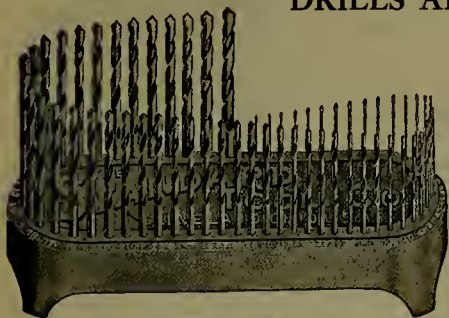


DRILLS AND COUNTERSINKS COMBINED

Size A, diameter of body .203 in., diameter of drill 1/16 in. Price, per doz. ....	\$2.75
Size B, diameter of body .301 in., diameter of drill 1/8 in. Price, per doz. ....	2.75
Size C, diameter of body .301 in., diameter of drill 3/32 in. Price, per doz. ....	2.75
Size F, diameter of body .436 in., diameter of drill 5/32 in. Price, per doz. ....	3.50
Size G, diameter of body .436 in., diameter of drill 3/16 in. Price, per doz. ....	3.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## DRILLS AND CHUCKS



### DRILL SET

The set takes in all the sizes of jobbers straight shank drills, from 1-16 to 1/2 in., inclusive, by 64ths. Each drill fits in a hole corresponding to its size, thus affording quick and accurate selection. A very neat metal drill holder and gauge combined.

No. 8—1 to 60 steel wire gauge drills with metal block. Price, complete, set .....\$13.25  
 No. 5—Straight shank drills, 1-16 to 1/2 in., varying by 64ths, with metal block. Price, complete, set.....\$15.00  
 Price of metal block extra ..... 2.40

### BIT STOCK DRILLS

No. 14. This set is furnished in a round, polished wood box, and contains one each, 1-16, 3-32, 1-8, 5-32, 3-16, 7-32, 1-4 inch drills. Price, per set.....\$3.00

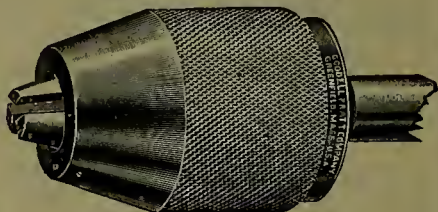
No. 13. This set is furnished in a round, polished wood box, and contains one each, 1-16, 3-32, 1-8, 5-32, 3-16, 7-32, 1-4, 5-16, 3-8 inch drills. Price, per set .....\$4.25



### No. 9 BENCH DRILL

Has solid iron frame. Cut gears and two different speeds, quickly changed by a shifter conveniently located. Has adjustable table, steel feed screws. Furnished complete with three-jaw chuck. Capacity 0 to 3/8, and 8 fluted drills, from 1-16 inch to 11-64 inch. Shipping weight, 18 pounds. Price, each .....\$11.00

### GOODSELL DRILL CHUCK



Centered Chucks, easy to fit any lathe, also Post and Bench Drills, straight shank, 1/2 in. The three hardened steel jaws are held apart by separating springs which draw the jaws back as the chuck is loosened. Well finished, strong, accurate.

Straight shank, 1/2 in.	Each
Style 14 Capacity to 5/32 in.	.....\$1.50
Style 15. Capacity to 1/4 in.	..... 2.00
Style 15 1/2. Capacity to 3/8 in.	..... 2.40
Style 16. Capacity to 1/2 in.	..... 3.20
Style 16 1/2. Capacity to 3/4 in. 1 in. shanks.	..... 8.00



### No. 137 Drill Chuck

#### HIGHEST TYPE OF DRILL CHUCK KNOWN

Has no projecting jaws, and the plate prevents larger work than the Chuck is designed for being used. It is very powerful and guaranteed to hold true, and not injure the shanks of the drills. It holds round or square work.

The jaws are guided by three strong gibs, and the screws are larger than in any Chuck of similar size and type. The jaws and screws are made from tool steel, carefully tempered. The hole in the hub is made to fit a Taper Arbor, but can be bored out and threaded to a special templet at small cost.

No. 00. Capacity 0 to 1/4 inch.	Price, each.....\$6.00
No. 0. Capacity 0 to 3/8 inch.	Price, each..... 6.50
No. 1. Capacity 0 to 1/2 inch.	Price, each..... 7.00
No. 2. Capacity 0 to 3/4 inch.	Price, each..... 8.00
No. 3. Capacity 0 to 1 inch.	Price, each.....10.00

## Ezy-Out Screw Extractor

Ezy-Out Screw Extractor Set No. 17 is not a chance collection. It is the result of a careful study of machine shop and garage requirements.

The three sizes which comprise this set are neither more nor less than you will need. They are merely full protection against the sorts and sizes of screws that are breaking in your shop usually at the most inconvenient time. But after you have used your set you will appreciate what a wonderfully easy way it is to extract broken screws. The only way that is quick and absolutely safe.

Set of 3 .....\$2.00

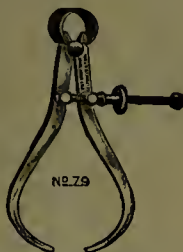


ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## STARRETT'S CALIPERS AND DIVIDERS



No. 73. Inside Caliper



No. 79 Outside Caliper



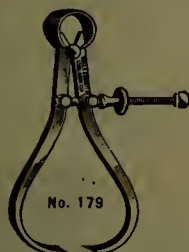
No. 83. Spring Divider

## YANKEE OUTSIDE AND INSIDE CALIPERS AND DIVIDERS

Prices on Nos. 73, 79 and 83

Size	With Solid Nut	With Spring Nut	Size	With Solid Nut	With Spring Nut
2 1/2 inch.....	each \$.65	each \$.80	5 inch.....	each \$.80	each \$.95
3 inch.....	each .70	each .85	6 inch.....	each .85	each 1.00
4 inch.....	each .75	each .90	8 inch.....	each 1.00	each 1.15

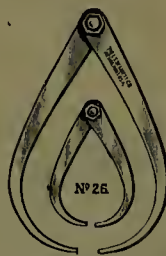
Sent with solid nut, unless otherwise ordered.



No. 179. Outside Thread Caliper



No. 184. Inside Thread Caliper



Improved Firm-Joint Calipers

The quality of these calipers is incomparably superior to that of any old style riveted-joint caliper on the market.

Prices.

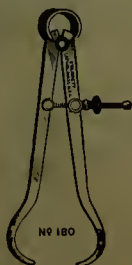
Nos.	Each
26 and 27	
3 inch.....	\$0.40
4 inch.....	.50
5 inch.....	.55
6 inch.....	.65
8 inch.....	.80
10 inch.....	.90
12 inch.....	1.00
14 inch.....	1.50
16 inch.....	1.75
18 inch.....	2.10
20 inch.....	2.50
24 inch.....	3.00

The above sizes refer to the length of the calipers. Their capacity is about one-third greater than the size given.

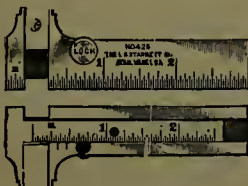
## YANKEE THREAD CALIPERS

These calipers are designed for measuring the diameter at bottom of threads. Prices, Nos. 179 and 184.

	With Solid Nut	With Spring Nut
4 inch, each.....	\$0.75	\$0.90
5 inch, each.....	.80	.95
6 inch, each.....	.85	1.00



Crank Shaft Caliper

Pocket Slide Calipers  
Inside and Outside

Graduated in 32ds and 64ths. The improved clamping device is a valuable feature.

No. 425. 3 in. long, each....	\$2.50
No. 425. 5 in. long, each....	3.50



No. 296. 4 in. long, each....\$1.50



Combination Square

Every tool warranted to be accurate.

No. 11. 6 inch with center head, each .....	\$1.50
No. 11. 9 inch with center head, each .....	1.75
No. 11. 12 inch with center head, each .....	2.00

These calipers were designed for use in turning automobile crank shafts and for reaching into difficult places. Made in one size only.

Each

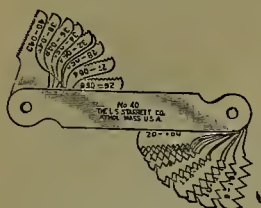
No. 180. 6 in. with solid nut..\$1.00

No. 180. 6 in. with spring nut.. 1.15

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## STARRETT'S



No. 40 and 4

## Screw Pitch Gauge

This gauge has twenty-two pitches and can be used inside a nut as well as on outside of screw or bolt.

Style No. 40. 22 pitches, ea. \$1.00

Style No. 4. 24 pitches, ea. 1.25



No. 188 and 189. English Standard Wire Gauges

No. 188 takes in 1 to 36. Ea. \$2.50

No. 189 takes in 6 to 36. Ea. 2.00

## Steel Music Wire Gauge

No. 280. Washburn and Moen standard. Each tested after hardening. Takes in No. 12 to No. 28. Price, each .....\$1.50

## GAUGES



No. 72. Thickness Gauge or "Feeler"

This gauge has 22 leaves, varying in thickness by thousandths, running from .004 to .025. The thickness of each leaf is designated by the number upon it. Each leaf may be used singly or in combination with others, and any thickness in thousandths within their limits may be quickly obtained.

Price, each .....\$1.50

## Size and Number of English Standard Wire Gauges

No. of Wire Gauge	0000	000	00	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Size of each No. in Decimal Parts of an Inch	.454	.425	.380	.340	.300	.284	.259	.238	.220	.203	.180	.165	.148	.134	.120	.109	.095	.083	.072	.065
No. of Wire Gauge	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Size of each No. in Decimal Parts of an Inch	.058	.049	.042	.035	.032	.028	.025	.022	.020	.018	.016	.014	.013	.012	.010	.009	.008	.007	.005	.004



Letters

## STEEL LETTERS AND FIGURES

Made of the best quality tool steel, carefully hardened; come packed complete in wood boxes.

## Letters

Sizes, inches ..... ¼

Price, set .....\$2.70

Sizes, inches ..... 3-16

Price, set .....\$3.75

## Figures

Sizes, inches ..... ¼

Price, set .....\$0.90

Sizes, inches ..... 3-16

Price, set .....\$1.25



Figures



## DIE STOCKS

Holding Round Solid and Round Adjustable Dies.

Each  
No. D for 13/16 in. diam. Dies, length 6 1/4 in. ....\$0.60  
No. F for 1 in. diam. Dies, length 9 in. ....1.00  
No. G for 1-5/16 in. diam. Dies, length 14 in. ....1.25  
No. M for 1 1/2 in. diam. Dies, length 14 in. ....1.50  
They will fit any make of die of above, diam.



## BIT BRACE DIE HOLDERS

No. 2. Holding Round Adjustable Dies, 13/16 in. diameter. Price, each .....\$0.75  
No. 3. Holding Round Adjustable Dies, 1 in. diameter. Price, each .....1.00  
The above prices are for the Holders only.

## ADJUSTABLE TAP WRENCHES



For machinists' taps. An adjustable tap and reamer wrench at a reasonable price, is what we here illustrate. Jaws made of best tool steel. They are made from drop forgings.

Size No. 0. Length 7 in., for taps 1/16 to 1/4 in. Price, each .....\$2.00

Size No. 6. Length 15 in., for taps 1/4 to 3/4 in. Price, each .....3.00

Size No. 7. Length 20 in., for taps 3/4 to 1 in. Price, each .....4.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## TAPS AND DIES

TAPER TAP

PLUG TAP

BOTTOMING TAP

## MACH. HAND TAP, TAPER, PLUG OR BOTTOMING

Diameter	Standard No. of Threads	S. A. E. or A. L. A. M. Threads	Price Each
3-16 inch.....	24	..	\$0.40
1/4 inch.....	20	28	.45
5-16 inch.....	18	24	.50
3/8 inch.....	16	24	.55
7-16 inch.....	14	20	.60
1/2 inch.....	12	20	.70
9-16 inch.....	12	..	.80
3/4 inch.....	11	18	.90
11-16 inch.....	11	..	1.05
1 inch.....	10	16	1.20
1 1/8 inch.....	9	..	1.60
1 1/4 inch.....	8	..	2.00

## STRAIGHT PIPE TAPS

Size	Price Each	Size	Price Each
3/8 inch.....	\$1.00	1 inch.....	\$4.40
1/2 inch.....	1.20	1 1/4 inch.....	5.00
3/4 inch.....	1.60	1 1/2 inch.....	6.60
1 inch.....	2.00	2 inch.....	10.00
1 1/4 inch.....	2.80		

## MACHINE SCREW TAPS

Size of Screw Gauge No.	Standard No. of Threads	Approximate Size in Inches	Price Each
2	56	5-64	\$0.45
3	48	..	.40
4	36	7-64	.40
5	36	..	.35
6	32	9-64	.35
8	32	5-32	.35
10	24	3-16	.35
10	32	3-16	.40
12	24	7-32	.45
14	20	1/4	.45
16	18	..	.45
18	18	9-32	.50
20	16	5-16	.50
24	16	3/8	.50



## SPARK PLUG TAP FOR AUTO USE

For threading and re-tapping Spark Plug Threads.

Metric Tap. Price, each .....	\$1.30
Standard 1/2 inch Pipe, Taper Tap. Price, each.....	.80
A. L. A. M. 1/4x18. Price, each.....	1.60



## ROUND ADJUSTABLE SPLIT DIES

Size	Threads to inch	Price, each 13-16 O.D. of die	Price, each 1 inch O.D. of die	Price, each 1 1/8 and 1 1/4 inch O.D. of die
3-16	24	\$0.50	..	..
1/4	20	.50	\$0.90	\$1.20
5-16	18	.50	.90	1.20
3/8	15	..	.90	1.20
7-16	14	..	.90	1.30
1/2	12	..	..	1.50

13-16 inch dies can be had in sizes by 64ths and in screw gauges numbers 1 to 16 inclusive at same price as above. One inch dies can be had in sizes by 64ths screw gauge numbers 4 to 24 inclusive, at same price as above.

A. L. A. M. Threads.

Furnished in sizes same as the above list in the 1, 1 1/8 and 1 1/4 inch outside diameter dies at prices same as above.

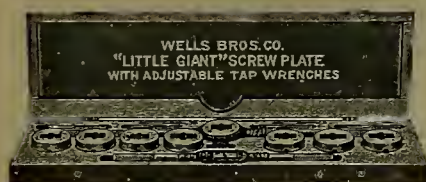


## LITTLE GIANT DIES AND COLLETS

Diameter Inches	Regular No. of "V" Thds. per Inch	S.A.E. or A.L.A.M. Threads	Price of Die	Price of Collets 2 Inch 2 1/2 Inch
3/16.....	24	..	\$1.70	\$0.90
1/4.....	20	28	1.70	.90
5/16.....	18	24	1.70	.90
3/8.....	16	24	2.30	.90
7/16.....	14	20	2.50	.90
1/2.....	12	20	2.50	.90
9/16.....	12	18	2.50	.90
5/8.....	11	18	2.80	.90
3/4.....	10	16	3.20	.90
7/8.....	9	14	4.30	.90
1.....	8	14	4.30	.90

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## SCREW PLATES



## ASSORTMENT No. 305, A. L. A. M.

Stock 14½ in. long Adjustable Tap Wrench No. 5.  
Plug Taps, Dies, Collets 2 in. diameter. Cutting ¼-28,  
5-16-24, ¾-24, 7-16-20, ½-20.

Price .....\$18.50

## ASSORTMENT No. 5, A. L. A. M.

Stock 23 in. long Adjustable Tap Wrench No. 6. Plug  
Taps, Dies, Collets 2½ in. in diameter. Cutting ¼-28,  
5-16-24, ¾-24, 7-16-20, ½-20, ¾-18, ¾-16.

Price .....\$27.50



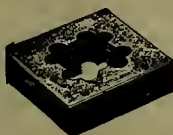
## \* SPLIT DIE SCREW PLATES

## List of Assortments, 13-16 Inch Diameter Dies

No. DD8. Cutting 1-16-72, 3-32-56, ¼-40, 5-32-32,  
3-16-24, 7-22-24, ¼-20, 9-32-20.

Price .....\$7.25

8 Taps, 8 Dies, Stock and Adjustable Tap Wrench.



## SOLID SQUARE DIES FOR PIPE

Size inches	Dimensions of Dies inches	Price
½ to ¾	2 x 2 x ¼	\$1.00
¾ to 1	2½ x 2½ x ¼	1.25
1 to 1½	2¾ x 2¾ x ¼	1.50
1½ to 2	3 x 3 x ¼	2.00

## ROUND SOLID DIES FOR PIPE

Size inches	Dimensions of Dies inches	Price
¾	1	\$1.25
1, 1½, 2	1-5/16	1.50
2, 2½, 3	1½	1.50



## ASSORTMENT No. 1 STANDARD

Stock 14½ in. long Adjustable Tap Wrench. No. 5  
Plug Taps, Dies, Collets 2 in. diameter. Cutting ¼-20,  
5-16-18, ¾-16, 7-16-14, ½-12.

Price .....\$18.50

## ASSORTMENT No. 5 STANDARD

Stock 23 in. long Adjustable Tap Wrench No. 6.  
Plug Taps, Dies, Collets 2½ in. diameter. Cutting ¼-20,  
5-16-18, ¾-16, 7-16-14, ½-12, ¾-11, ¾-10.

Price .....\$27.50

## DIES



## HEXAGON SOLID DIES

They are used principally for repair work and for dressing over bruised or rusty threads, and will go into any space that hexagon nuts will go into. They can be used in bit brace sockets, ratchet or monkey wrenches, and will be found convenient in many ways. All orders will be filled with U. S. S. threads unless otherwise specified.

Diam. in.		No. Threads to inch		Size of Die		
Stand. size	U. S. Stand. ard	A. L. A. M.	Cross Flats	Thick- ness	Price	
1/4	20	28	1/2	1/4	\$0.60	
5/16	18	24	19/32	5/16	.65	
3/8	16	24	11/16	3/8	.70	
7/16	14	20	25/32	7/16	.75	
1/2	13	20	7/8	1/2	.80	
9/16	12	18	31/32	1/2	.85	
5/8	11	18	1-1/16	5/8	.90	



## "LITTLE GIANT" FULL STOCKED SCREW PLATES FOR PIPE

Number	Size of Pipe Inches	Length of Stock Inches	Price
81	¾	8¾	\$2.20
82	¾	13½	2.70
83	¾	20½	3.20
84	¾	25½	4.20
85	1	29	5.20
86	1½	39½	8.50
87	1½	50	11.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## Set Screws



## Square Head Cup Point

An assortment of fourteen in a box. Two each  $\frac{1}{4}$  in.,  $\frac{3}{8}$  in. and  $\frac{1}{2}$  in. Two each 5-16 in.,  $\frac{3}{8}$  in.,  $\frac{7}{8}$  in. and  $1\frac{1}{4}$  in. long. Two each  $\frac{1}{4}$  in., 1 in. and  $1\frac{1}{2}$  in. long. No. 14. Standard thread. Price, per box.....\$0.50

## Whitney Keys



## Whitney Keys Assorted

Put up in wooden boxes containing one hundred in sizes mostly used. Price, per box .....\$3.50

## Special Repair Screws



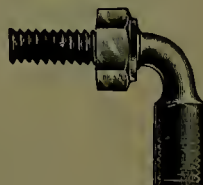
## A. L. A. M. or S. A. E. Thread

These are of superior quality turned from the bar and threaded nearly their entire length. In numerous instances this feature facilitates making repairs because of it being necessary frequently to rethread the ordinary stock screws. Save considerable time and annoyance.

Made of the maximum required length so they can be cut off at any length desired.

Diam.	Length	Threads per inch	Diam. Head	Each
$\frac{1}{4}$	$1\frac{1}{2}$	28	$\frac{1}{8}$	\$0.05
$\frac{3}{8}$	$1\frac{3}{4}$	24	$\frac{3}{8}$	.06
$\frac{1}{2}$	2	24	$\frac{1}{2}$	.08
$\frac{3}{4}$	$2\frac{1}{2}$	20	$\frac{3}{4}$	.10
$\frac{1}{2}$	$2\frac{1}{2}$	20	$\frac{1}{2}$	.15

## Ball Joints



—Tapped End—				Threaded or Screw End	
No.	Inside Diam.	Thread	Socket	Outside Diam.	Thread
1	10	32	9-32	5-16	18
2	$\frac{3}{4}$	20	9-32	5-16	18
3	$\frac{1}{4}$	24	9-32	$\frac{3}{4}$	27
4	$\frac{1}{4}$	27	9-32	$\frac{3}{4}$	27
5	$\frac{1}{4}$	28	9-32	$\frac{3}{4}$	28
6	$\frac{3}{4}$	20	5-16	$\frac{3}{4}$	16
7	$\frac{3}{4}$	20	9-32	$\frac{3}{4}$	20
8	3-16	32	9-32	3-16	32
9	7-32	32	9-32	7-32	32
12	6	32	3-16	10	32
13	7-32	32	9-32	7-32	32

Note: No. 13 is supplied with cotter pin hole, which is used very largely on Ford machines.

## Copper Rivets



## Regular Copper Rivets and Burrs

No. 7.	$\frac{1}{2}$ , $\frac{3}{8}$ , $\frac{1}{4}$ , 1 in.	Price, per $\frac{1}{2}$ pound box	\$0.55
No. 8.	$\frac{1}{2}$ , $\frac{3}{8}$ , $\frac{1}{4}$ , 1 in.	Price, per $\frac{1}{2}$ pound box	.55
No. 9.	$\frac{1}{2}$ , $\frac{3}{8}$ , $\frac{1}{4}$ , 1 in.	Price, per $\frac{1}{2}$ pound box	.60
No. 10.	$\frac{1}{2}$ , $\frac{3}{8}$ , $\frac{1}{4}$ , 1 in.	Price, per $\frac{1}{2}$ pound box	.60

## Split Rivets

No. 1815.	5-32x $\frac{1}{4}$ .	Per hundred	.....\$0.40
No. 1815.	5-32x $\frac{3}{8}$ .	Per hundred	..... .45
No. 1710.	3-16x $\frac{3}{8}$ .	Per hundred	..... .65
No. 1710.	3-16x $\frac{1}{4}$ .	Per hundred	... .65

## Special Countersunk Copper Rivets for Brake Lining—No Burrs



No. 7.	$\frac{1}{2}$ , $\frac{3}{8}$ , $\frac{1}{4}$ , 1 in.	Price, per $\frac{1}{2}$ pound box	\$0.55
No. 8.	$\frac{1}{2}$ , $\frac{3}{8}$ , $\frac{1}{4}$ , 1 in.	Price, per $\frac{1}{2}$ pound box	.55
No. 9.	$\frac{1}{2}$ , $\frac{3}{8}$ , $\frac{1}{4}$ .	Price, per $\frac{1}{2}$ pound box....	.60
No. 10.	$\frac{1}{2}$ , $\frac{3}{8}$ , $\frac{1}{4}$ .	Price, per $\frac{1}{2}$ pound box....	.60

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## Brass Wood Screws



Assorted flat and round heads, 6 dozen.

Box .....\$1.25

## Brass Machine Screws and Nuts



Assorted, 2 dozen.

Box .....\$1.00

## Iron Wood Screws



Assorted flat and round heads, 6 dozen.

Box .....\$0.85

## Iron Machine Screws and Nuts



Box, Assorted, 2 dozen .....\$0.50

Box, Assorted, one gross Nickel Plated..... 2.00

## Iron Bolts and Nuts



Assorted, 1 1/2 dozen.

Box .....\$0.50

## Copper Rivets and Burrs



Assorted, 2 1/2 dozen

Box .....\$0.50

· ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## Cotter Pins



Assorted spring cotter pins of various lengths and thicknesses.

"Just the thing for your tool box."

Price .....\$0.25

All sizes in bulk.

## Lock Washers



These lock washers are made especially for automobile work, are thin, strong and reliable. A full assortment of sizes, from  $\frac{1}{8}$ -inch to  $\frac{3}{8}$ -in. hole, advancing by sixteenths of an inch.

Price, per box .....\$0.20

All sizes in bulk.

## Hexagon Head Cap Screws



An assortment of cap screws in various sizes.

Made up especially for automobile use.

Price, per box, U. S. S. ....\$0.45

A. L. A. M. ....\$5

All sizes in bulk.

## Castellated Nuts



Assorted in five sizes standard A. L. A. M. threads. A cotter pin prevents them from getting loose or coming off.

Price, per box, U. S. S. ....\$0.50

A. L. A. M. ....\$0.50

All sizes in bulk.

## Semi-Finished Hexagon Nuts



A fine assortment of semi-finished hexagon nuts in various sizes as used on automobiles.

Price, per box .....\$0.50

All sizes in bulk.

## Standard Steel Taper Pins



These Standard Steel Taper Pins are indispensable for automobiles. No tool kit should be without them.

Price, per box .....\$0.65

All sizes in bulk.

## Cotter Tools



A handy tool for disengaging cotter pins, 7 in.

Price .....\$0.50

## The Only Cotter Setter



Will insert cotter pins impossible to reach with a plier or other means. Extract them as readily. A long needed tool.

Price, each .....\$0.75

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## TAPER AND COTTER PINS, LOCK WASHERS



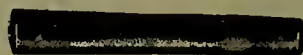
### SPLIT COTTER PINS IN BULK

Price per 1000

Diameter, in.	1/16	5/64	3/32	7/64	1/8	5/32	3/16	1/4
Length 1/2 in.	\$3.50	\$3.50	\$3.50	\$4.00	\$5.00	\$7.00	.....	.....
Length 5/8 in.	4.15	4.15	4.15	4.75	5.85	8.15	\$11.10	.....
Length 1 in.	4.80	4.80	4.80	5.50	6.70	9.30	12.80	\$14.00
Length 1 1/4 in.	5.45	5.45	5.45	6.25	7.55	10.45	14.50	16.00
Length 1 1/2 in.	6.10	6.10	6.10	7.00	8.40	11.60	16.20	18.00
Length 1 3/4 in.	6.75	6.75	6.75	7.75	9.25	12.75	17.90	20.00
Length 2 in.	7.40	7.40	7.40	8.50	10.10	13.90	19.60	22.00
Length 2 1/4 in.	.....	.....	.....	.....	10.95	15.05	21.30	24.00
Length 2 1/2 in.	.....	.....	.....	.....	11.80	16.20	23.00	26.00

Packed 1000 in a box up to 1/8 x 2 in. Larger sizes 500 in a box.

Assortment in bulk, consisting of 3000 cotter pins of all popular sizes. Just the thing for garage or shop use, packed in neat wooden box ..... Per box, \$3.00



### STANDARD STEEL TAPER PINS

Taper one-quarter inch to the foot. In giving sizes other than those included in list, measure at largest point.

Price per Hundred

Diameter large end,.....	.156	.172	.193	.219	.250	.289	.341	.409	.492
Approximate sizes.....	5/32	11/64	3/16	7/32	1/4	19/64	11/32	13/32	1/2
Number.....	0	1	2	3	4	5	6	7	8
1/4 inch.....	\$1.80	\$2.00	\$2.10	\$2.30	\$2.50	\$2.75	\$3.00	.....	.....
1/2 inch.....	2.05	2.25	2.35	2.55	2.75	3.00	3.25	\$3.75	.....
5/8 inch.....	2.30	2.50	2.60	2.80	3.00	3.25	3.50	4.00	\$4.65
1 1/4 inch.....	2.55	2.75	2.85	3.05	3.25	3.50	3.75	4.25	5.00
1 1/2 inch.....	2.80	3.00	3.10	3.30	3.50	3.75	4.00	4.50	5.40
2 inch.....	3.05	3.25	3.35	3.55	3.75	4.00	4.35	4.75	5.80
2 1/4 inch.....	3.30	3.50	3.60	3.80	4.00	4.40	4.75	5.25	6.25
2 1/2 inch.....	.....	.....	3.85	4.05	4.25	4.75	5.20	5.75	6.75
2 3/4 inch.....	.....	.....	.....	4.30	4.50	5.10	5.70	6.25	7.25
3 inch.....	.....	.....	.....	4.55	4.75	5.45	6.25	6.75	7.80



### LOCK WASHERS IN BULK—PLAIN PATTERN

Bolt size.....	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1
Stock size.....	1/16	5/64	1/8	5/32	5/32	3/16	3/16	3/16	3/16	1/4	1/4
	x	x	x	x	x	x	x	x	x	x	x
	3/64	1/16	1/16	1/16	1/16	1/16	1/16	3/32	3/32	3/32	3/32
Price, per box of 100..	\$0.16	\$0.33	\$0.52	\$0.69	\$0.76	\$0.93	\$1.05	\$1.32	\$1.56	\$2.16	\$2.49
Price, per box of 500	.74	1.48	2.38	3.13	3.48	4.23	4.78	6.05	7.15	9.90	11.38
Price, per box of 1000..	1.35	2.70	4.35	5.70	6.35	7.70	8.70	11.00	13.00	18.00	20.70

### PLAIN IRON WASHERS

Bolt size.....	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1
Price, per pound.....	\$0.30	\$0.30	\$0.25	\$0.25	\$0.20	\$0.20	\$0.18	\$0.18	\$0.15	\$0.15	\$0.12

### PLAIN BRASS WASHERS

Size of Mach. Screw, No.....	4	6	8	10	12	14	16	18	20	24
Outside Diameter.....	9/32	3/8	3/8	7/16	1/2	9/16	5/8	11/16	3/4	7/8
Price, per pound.....	\$3.25	\$2.25	\$2.25	\$2.00	\$1.85	\$1.85	\$1.75	\$1.75	\$1.75	\$1.75

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## CAP SCREWS AND NUTS



## HEX HEAD CAP SCREWS

With S. A. E. (A. L. A. M.) Threads

Per 100	Per 100
3/4x1/4x28 .....\$3.45	1-3/4x3/8x24 .....\$6.05
1x1/4x28 ..... 3.85	2 x3/8x24 ..... 6.50
1-1/4x1/4x28 ..... 4.10	2-1/4x3/8x24 ..... 6.95
1-1/2x1/4x28 ..... 4.40	2-1/2x3/8x24 ..... 7.50
1-3/4x1/4x28 ..... 4.70	3 x3/8x24 ..... 9.00
2x1/4x28 ..... 5.00	
2-1/4x1/4x28 ..... 5.90	
2-1/2x1/4x28 ..... 6.55	
3x1/4x28 ..... 7.80	
3/4x5/16x24 ..... 4.10	1 x7/16x20 ..... 6.80
1x5/16x24 ..... 4.50	1-1/4x7/16x20 ..... 7.35
1-1/4x5/16x24 ..... 4.80	1-1/2x7/16x20 ..... 8.00
1-1/2x5/16x24 ..... 5.10	1-3/4x7/16x20 ..... 8.65
1-3/4x5/16x24 ..... 5.45	2 x7/16x20 ..... 9.25
2x5/16x24 ..... 6.05	2-1/4x7/16x20 ..... 10.05
2-1/4x5/16x24 ..... 6.70	2-1/2x7/16x20 ..... 10.65
2-1/2x5/16x24 ..... 7.25	3 x7/16x20 ..... 11.95
3x5/16x24 ..... 8.50	
3/4x3/8x24 ..... 4.70	1 x1/2x20 ..... 7.40
1x3/8x24 ..... 5.10	1-1/4x1/2x20 ..... 8.15
1-1/4x3/8x24 ..... 5.35	1-1/2x1/2x20 ..... 8.90
1-1/2x3/8x24 ..... 5.65	1-3/4x1/2x20 ..... 9.65
	2 x1/2x20 ..... 10.40
	2-1/4x1/2x20 ..... 11.15
	2-1/2x1/2x20 ..... 11.90
	3 x1/2x20 ..... 13.40

Larger sizes on application.



## HEX HEAD CAP SCREWS

With Standard V-Thread

Per 100	Per 100
3/4x1/4x20 .....\$3.00	1-3/4x3/8x16 .....\$4.85
1x1/4x20 ..... 3.25	2 x3/8x16 ..... 5.20
1-1/4x1/4x20 ..... 3.50	2-1/4x3/8x16 ..... 5.55
1-1/2x1/4x20 ..... 3.75	2-1/2x3/8x16 ..... 6.00
1-3/4x1/4x20 ..... 4.00	3 x3/8x16 ..... 7.20
2x1/4x20 ..... 4.25	
2-1/4x1/4x20 ..... 4.70	
2-1/2x1/4x20 ..... 5.75	1 x7/16x14 ..... 4.00
3x1/4x20 ..... 6.25	1-1/4x7/16x14 ..... 5.00
	1-1/2x7/16x14 ..... 5.10
	1-3/4x7/16x14 ..... 6.00
	2 x7/16x14 ..... 6.50
	2-1/4x7/16x14 ..... 7.15
	2-1/2x7/16x14 ..... 7.50
	3 x7/16x14 ..... 8.10
3/4x5/16x18 ..... 3.25	1 x1/2x12 ..... 5.90
1 x5/16x18 ..... 3.50	1-1/4x1/2x12 ..... 6.50
1-1/4x5/16x18 ..... 3.75	1-1/2x1/2x12 ..... 7.10
1-1/2x5/16x18 ..... 4.00	1-3/4x1/2x12 ..... 7.70
1-3/4x5/16x18 ..... 4.25	2 x1/2x12 ..... 8.30
2 x5/16x18 ..... 4.85	2-1/4x1/2x12 ..... 8.90
2-1/4x5/16x18 ..... 5.35	2-1/2x1/2x12 ..... 9.50
2-1/2x5/16x18 ..... 5.85	3 x1/2x12 ..... 10.70
3 x5/16x18 ..... 6.80	
3/4x3/8x16 ..... 3.75	
1 x3/8x16 ..... 4.00	
1-1/4x3/8x16 ..... 4.35	
1-1/2x3/8x16 ..... 4.50	

Larger sizes on application.



## MILLED STEEL CASTELLATED NUTS

With S. A. E. (A. L. A. M.) Threads

These nuts are castellated to receive cotter pin as a locking device.

Size Bolt	Thread	Per 100
1/4	28	.....\$3.00
5/16	24	..... 3.60
3/8	24	..... 4.20
7/16	20	..... 5.00
1/2	20	..... 5.75
5/8	18	..... 7.00

## CASTELLATED NUTS—SEMI-FINISHED

With Standard V Threads

Size Bolt	Thread	Per 100
1/4	20	.....\$3.00
5/16	18	..... 3.60
3/8	16	..... 4.20
7/16	14	..... 5.00
1/2	13 or 12	..... 5.75
5/8	11	..... 7.00

## BLANK HEX NUTS

Size	Price per lb.	Size	Price per lb.
1/4 inch	.....\$1.50	1/2 inch	.....\$0.70
5/16 inch	..... 1.30	9/16 inch	..... .70
3/8 inch	..... 1.00	5/8 inch	..... .60
7/16 inch	..... .90		



## PLAIN HEXAGON NUTS

With S. A. E. (A. L. A. M.) Threads

These nuts are turned from the bar—a product much superior to the ordinary punched or stamped nuts.

Size Bolt	Thread	Per 100
1/4	28	.....\$2.00
5/16	24	..... 2.50
3/8	24	..... 3.25
7/16	20	..... 3.75
1/2	20	..... 4.50
9/16	18	..... 5.50
5/8	18	..... 6.50
11/16	16	..... 8.50
3/4	16	..... 9.00

## PLAIN HEXAGON NUTS

With Standard V Threads

Size Bolt	Thread	Per 100
1/4	20	.....\$2.00
5/16	18	..... 2.50
3/8	16	..... 3.25
7/16	14	..... 3.75
1/2	13 or 12	..... 4.50
9/16	12	..... 5.50
5/8	11	..... 6.50
11/16	11	..... 8.50
3/4	10	..... 9.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# FORD ✻

# ✻ SECTION

The articles listed on the following pages are either made especially, or adapted for use on the Ford Car and will be found particularly interesting to "Your Ford Owners" not only on account of their convenience but also for the prices at which they are sold.





OIL SIDE LAMP.

The latest creation in automobile lamp construction, design and efficiency. The principle involved in the burner and draughts has for years been tested and used with recognized merit of efficiency in the burning qualities. All parts are made from a specially treated steel, giving additional strength to withstand road vibration. One piece body, oil joint top and draught cone. Special patented locking devices. Down draught principle, combination prop. Special semaphore lens with heavy French roll door with new style catch.

Extreme height, 9 $\frac{3}{4}$  in.

Extreme depth, 5 in.

Diameter of front glass, 3 $\frac{3}{4}$  in.

Finish, all black, pair.....\$4.50

## LAMPS



GAS HEAD LAMP.

A high grade gas lamp. Body drawn in one piece from heavy gauge steel, all parts solidly riveted. Finished with three coats of enamel thoroughly baked on. Equipped with a 6 in. Mangin mirror. Front diameter 9 in., distance between props 7 in. Finish all Black.

Complete with brackets, pair..\$8.50

Brackets only, pair ..... 1.50



OIL TAIL LAMP.

The success of these oil lamps has been universally conceded. Their production is recognized as the largest in the world. The down draught or cold blast principle has been perfected in this type of lamp and has given satisfaction to the users for years. All lamps are made from heavy gauge stock. Combination prop. Oil founts securely fastened. Semaphore Ruby glass. Warranted to stay lighted under all conditions. Patented locking devices.

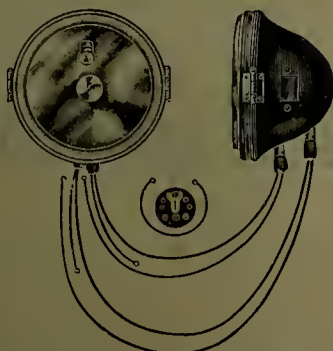
Extreme height, 9 $\frac{3}{4}$  in.

Extreme depth, 5 in.

Diameter of Semaphore, 3 $\frac{3}{4}$  in.

Finish, all black, each.....\$2.50

## Ford Double Bulb Head Lamp Outfit



The latest thing in Ford Outfits. This Outfit consists of two Headlamps with double sockets and double bulbs, switch, and full wiring to attach the large bulb to the magneto and the small bulb to the dry cells or to any storage battery, so that when the car is not running the small bulbs will burn, thereby complying with the law.

In Black and Brass or Black and Nickel.

No. 40. 9 $\frac{1}{4}$ -inch diameter, 7 $\frac{1}{2}$ -inch prop center.

Price, per set, complete with bulbs.....\$11.50

## Electric Head Light



Made especially for cars which require a neat, compact, close coupled lamp with high efficiency at a low price. One piece body. Round door. Heavy silver plated parabolic reflector fastened in the body. Patented focal adjustment to equalize any bulb variation. Dust and water-proof. Patented locking device on door.

Extreme height, 9 in.

Extreme depth, 4 $\frac{7}{8}$  in.

Diameter of front glass, 8 $\frac{1}{4}$  in.

Finish, all black.

Pair .....\$8.25

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# LAMPS

## ELECTRIC SIDE LIGHT



The Electric Side Light is designed to meet the requirements of a lamp where a bolt bracket is desirable. Heavy French roll door with semaphore glass. Height  $5\frac{1}{4}$  inches, depth  $4\frac{1}{4}$  inches, diameter of front glass  $4\frac{1}{2}$  inches, finish all black.

Price, each .....\$2.50

The Electric Tail Lamp complies with all city ordinances and state laws. Has bolt and nut at back to fit Ford cars. 6 volt, 2 candle power Mazda bulb, G-6 size. Height  $3\frac{3}{4}$  inches, depth 3 inches, diameter of front glass  $3\frac{3}{8}$  inches, finish all black.

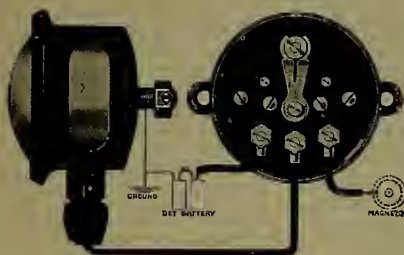
Price, each .....\$1.75

## ELECTRIC TAIL LIGHT



## SINGLE BULB ELECTRIC TAIL LAMP

### 49L INDICATING

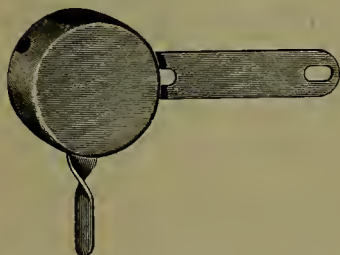


The 49L Indicating Tail Lamp is a single bulb lamp which may be used on either magneto or batteries. A four point dash control switch is furnished containing a 3-4-volt bulb (same as contained in lamp). On magneto circuit these lamps are connected in series and dash lamp will show whether tail lamp is lit or not, as well as light the dashboard. In case tail lamp should burn out at any time, dash bulb may be removed and used in its place.

When car is standing and engine is not running switch to dry batteries and you thereby decrease chances of accident, as well as comply with the law.

No. 49L. Price, each ..... \$3.00

## THE FORDIMMER



Prevents the lights from burning out at high engine speed. In the Ford car the lights are wired in series, so that if one burns out both are out. When the engine is racing, therefore, or the car is running at high speed, there is grave danger of the lights burning out and leaving the driver in utter darkness.

Regulates the voltage pressure to the head lights and does not interfere with the ignition system nor cause the engine to miss.

Assembled in a black enamel case and mounted on the steering column. Made of the very best material, is guaranteed, is absolutely foolproof, and can be attached in a very few minutes.

Built for 9 volt 2 ampere bulbs, which is standard Ford equipment. To obtain best results use only this bulb.

Each .....\$1.50

## TWO-LIGHT BULB CASE



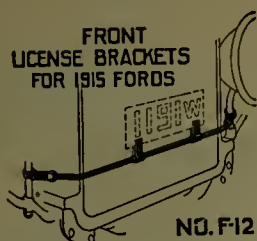
This case consists of a steel cylindrical tube with a removable cover on each end held securely in place by a bayonet locking device. Each cover when removed has a socket with spring to securely hold a standard electric headlight bulb. The bulb is inserted in the socket and cover put on the end of the tube. It has the advantage of absolute protection to the bulbs, quick and convenient to get a bulb, small space, and last, but not least, high quality, but cheap in price.

No. 01— $2\frac{1}{4}$  inches diameter by  $7\frac{1}{2}$  inches long.  
Each .....\$0.35

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## "Gemco" License Clamps and Tie Rod

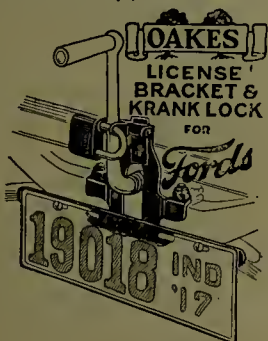
FRONT  
LICENSE BRACKETS  
FOR 1915 FORDS



NO. F12

To fit the special front lamp brackets on 1915 Ford cars we have designed special Tie Rod Bar as per the above illustration. This takes the place of our F-10, suitable for previous models. It is a very efficient license holder and at the same time it eliminates vibration of the lamp brackets.

Price, complete with clamps, each .....\$1.00



FULLY GUARANTEED.

Bought separately, it would cost you \$2.00 to duplicate the license bracket, the crank holder and the thief-proof lock, and then it would not be so compact, neat in appearance and so easy to install. Three devices in one for only .....\$1.00

Furnished without padlock, each..... .50



No. 97—Front Tag Clips for Ford cars. Fit all models. Stamped from heavy gauge steel. Packed one set in a box.

Set .....\$0.25

## Ford Mirrorscope



4-inch reducing mirror; black frame; special Ford bracket; attaches to windshield without change.

Price, each .....\$1.00

## Ford Motometer

A most necessary accessory for Ford cars owing to the well known tendency of the Ford motor to heat up. Mounted on your radiator cap the Motometer gives immediate warning of any undue increase in the temperature of your motor and allows you to forestall any injurious consequences.

Also in cold weather you have a signal which gives you due warning of any tendency to freeze.

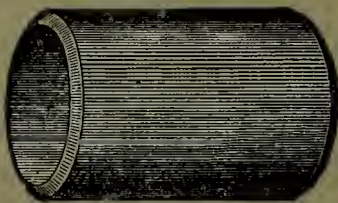
It is cheaper to prevent trouble than to cure it.

The Ford Motometer comes complete, together with highly polished radiator cap already attached, just change the radiator cap. Adds greatly to the appearance of your car and puts it in a class with the higher priced cars for efficiency.

Price complete .....\$2.75



## Radiator Hose



Special Ford Radiator Hose, cut in lengths for use on Ford cars. This hose is beveled, with capped ends and built up of high grade

Each

No. 1. 1 1/4 inch inside diameter by 2 1/4 inches

long .....\$0.15

No. 2. 2 inches inside diameter by 3 1/4 inches long .20

## Hose Clamps



These are the conventional design stamped from heavy steel and sherardized to prevent rust. They are constructed so that they tighten evenly all the way round and will prove satisfactory in every respect. Furnished in either inlet or outlet size.

Per doz.

For Radiator Outlet Hose, 1 1/4 inches.....\$3.50

For Cylinder Outlet Hose, 1 1/4 inches..... 3.50

For Cylinder Head Outlet Hose, 2 inches..... 4.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## LIVINGSTON HONEYCOMB RADIATORS

LIVINGSTON HONEYCOMB RADIATOR. MADE TO FIT THE  
STANDARD FORD SHELL OF THE 1917, 1918 AND  
1919 MODEL



"NO. 1."

The danger of split tubes, due to freezing, is eliminated. Small corrugations in the tube walls, while adding strength, also allow for slight expansion. When the ice forms within they return the tube to its original form as the ice melts.

To comply with the increasing demand for a straight front type efficient radiator for replacement, The Livingston Radiator Corporation offers the Livingston No. 1 Honeycomb Radiator, which will fit any standard 1917-18-19 Ford type radiator shell. The famous Livingston tube is employed to give rigidity and strength, and to allow for proper cooling of the heated water based on the radiation area demanded by the Ford motor.

**Construction.** The Livingston construction, embodied in vertical, flat tubes, with square corrugations, swaged to form the water spaces, and edges lapped, makes possible points of excellence not to be found in any other make of radiator.

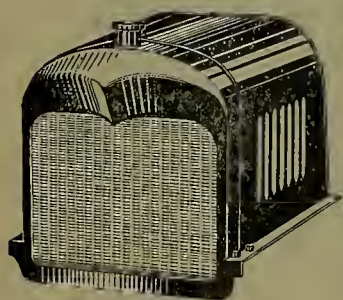
**Ribbons of Water.** A very thin volume of water, always the most quickly cooled, is secured by the flat tubes, which have exactly the right water capacity for the amount of radiating surface.

**Circulation.** Enforced circulation through the horizontal runs of the square corrugated tubes, doubles the distance the water must travel in direct contact with the radiating surfaces, thus greatly increasing the cooling efficiency.

**Direct Radiation.** All the radiating surfaces are in direct contact with the circulating water, insuring best results, as direct radiation is more efficient than indirect for a given surface.

Price, each .....\$30.00

## DUNHAM RADIATOR SHELL AND HOOD



The shell slips over Ford Radiator, completely covering all parts, except the radiating surface. The front of hood sets on shell and rear rests on dash, giving a most graceful, stream line effect.

Model B5, as illustrated, is the Bull Dog type and projects about four inches ahead of the radiator face and gives an appearance of a much longer wheelbase. The hood is made in two pieces with one center hinge only and in four pieces with one center and two side water-proof hinges.

B5—For 1915 and 1916 Cars

Shell, hood and radiator cap, each .....\$17.00

B5L—For 1909 to 1914 Cars

Shell, hood and radiator cap, each ..... 18.00

E4—For 1917-1919 Cars

Shell, hood and radiator cap, each ..... 16.58

E—Shell only, 1917-1919, each ..... 8.00

4050—Hood only, 1909-1916, each ..... 8.50

4050B—Hood only, 1917-1919, each ..... 8.50

## THE PITTER MULTIBLADE FAN



WILL POSITIVELY PREVENT YOUR FORD CAR FROM  
OVERHEATING.

50 Per Cent. More Air Displacement with Same Power.

80 Per Cent. of all Motor Repairs are Caused by Overheating.

The Pitter Fan draws the air from the outer ends of the blades in addition to from the rear, as in ALL old style fans. In consequence, it draws air through every square inch of the radiator surface, while the old style fan draws air through the center of the radiator only and uses but one-half of same for cooling purposes.

No mechanic is required to install the fan; anyone can attach same in five minutes; just unscrew one bolt, remove old fan and slip the Pitter Fan on same Ford fixtures.

Each .....\$3.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## THE UNIVERSAL CROWN FENDERS FOR FORD CARS



Notice the graceful lines and improved appearance of the car. When viewed from the side, front or rear, the transformed car presents an air of distinction noticeable at once to Ford owners and purchasers.

Length, as well as beauty, seems to be added to the well-known and deservedly popular Ford.

In designing the UNIVERSAL CROWN FENDER, the element of strength received the particular attention of the engineer. The oval shape top of the fender acts as a brace, insuring greater strength and better protection. The crowned tops of the fenders are free from unsightly rivets, the supporting iron being attached to the stiffener under the edge of the fender.

The UNIVERSAL CROWN FENDERS are easily and quickly attached to the car. They do not require new fender irons or any alterations in the car.

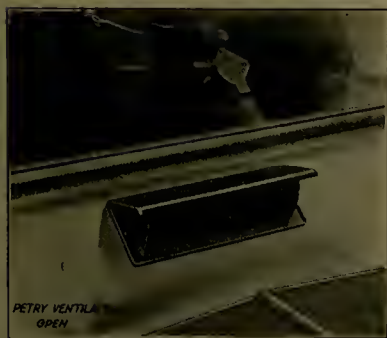
Equal in every respect to fenders used on the highest priced cars.

Specifications—Made of the best five pass steel with two coats of best black enamel. Stiffener wired top and bottom, to which supporting re-inforced iron brackets are riveted. Running board shield extension for front fenders. Fenders are 10 inches wide, crown 8 inches wide,  $\frac{3}{4}$  inch high. Closely inspected and carefully crated for shipment.

In ordering specify "UNIVERSAL CROWN" Fenders (10 inches wide) of your jobber or Ford distributor and mention model of car. Made for all models including 60 inch treads. Price, F. O. B. Detroit, Mich. .... \$18.00

## THE PETRY VENTILATOR

### A Boon to the Driver



A much desired necessity for the Ford driver.

Perfectly ventilates the driver's compartment, eliminating the discomfort from a hot motor.

The Petry Ventilator may be opened or closed at will from the driver's seat.

The baffle plate and sides form a scoop which catches and throws all the air on the floor—not on the passengers.

Little or much ventilation. The only Ventilator that has the adjustment self-contained.

Water-proof and dust-proof, when closed, especially designed with this in view.

No springs—no rattle, nothing to get out of order.

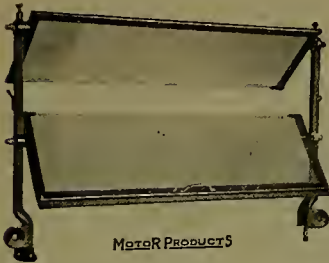
Unsurpassed in appearance or efficiency by any built-in job. Made of stamped steel throughout, handsomely finished in baked enamel. Application on the cowl is simple and inexpensive.

Price, each .....\$3.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

WIND SHIELDS

Adjustable Type

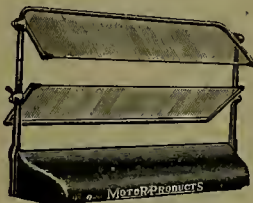


Fits 1915-16-17-18-19 models. Featuring rain vision and ventilation, both of which add materially to the safety and comfort of the motorist.  
Complete, ready to attach. Simply take off the old shield and put on the new.  
Z 17, each .....\$17 00

Ford Truck Type



De Luxe Cowl Type



FOR 1914 CARS

Combines the rain vision and ventilating features with a cowl dash designed to bring the straight dash 1914 Ford car up to date and give it the streamline effect of the later cars. It is well designed and the shield is equipped with the best quality plate glass. Furnished complete, ready to attach.  
V-15, each .....\$15.00

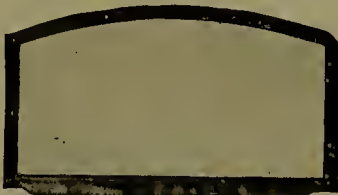
WITH SLIP DASH

Ready to attach to chassis. Dash is made of hard wood with mitred corners and tongue and groove joints. Black finish. This windshield fills the demand for a rain vision, ventilating windshield embodying all modern features of the latest type pleasure car shields, plus sturdy construction for commercial use. No stay rods used.

Construction: Stanchions, pressed steel with extra deep channel brackets to fit ends of regular 34½-in. dash. Glass; polished plate, hinges; upper ball lock, lower, cone friction. Finish, black enamel.

Rubber strip set into bottom rail of lower frame makes weather proof junction with filler board.  
No. 100, with slip dash, each .....\$22.50

Rear Window Curtain for Ford Cars



Made of high quality celluloid, neatly bound with leatherette; holes in celluloid are reinforced with 12 eyelets. This is a very neat and substantial curtain. Furnished with 12 clasp fastenings. Will also fit Overland cars.  
Each .....\$0.75  
1917 rear window curtains consist of 3 pieces.  
Complete set of 3 .....\$0.75

Delivery Car Type



Same as above with filler board only.  
No. 100, with filler board, each .....\$19.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## GORDON SEAT COVERS FOR FORD CARS ONLY



Cover the Arm Rests, Lazybacks, Cushions and Doors.

CAR		1057	1000	1032	1042
		1071	1050	1027	1051
Ford Early Tour.....	5p.....	1911	19.00	22.00	25.50
Ford Late Tour.....	5p.....	1911	19.00	22.00	25.50
Ford Early Tour.....	5p.....	1912	20.50	24.00	29.00
Ford Late Tour.....	5p.....	1912	20.50	24.00	29.00
Ford Tour.....	5p.....	1913	20.50	24.00	29.00
Ford Tour.....	5p.....	1914	20.25	23.75	28.75
Ford Tour.....	5p.....	1915	17.50	21.25	25.75
Ford Tour.....	5p.....	1916	17.50	21.25	25.75
Ford Tour.....	5p.....	1917	17.50	21.25	25.75
Ford Tour.....	5p.....	1918	17.50	21.25	25.75
Ford Sedan.....	5p.....	1915	25.50	29.00	35.00
Ford Sedan.....	5p.....	1916	24.50	28.25	34.25
Ford Sedan.....	5p.....	1917	24.00	27.50	33.25
Ford Town Car.....	5p.....	1916	28.00	32.00	38.25
Ford Runabout.....	2p.....	1911	10.75	12.50	15.00
Ford Runabout.....	2p.....	1912	11.50	13.50	16.25
Ford Runabout.....	2p.....	1913	11.50	13.50	16.25
Ford Runabout.....	2p.....	1914	11.00	12.75	15.25
Ford Runabout.....	2p.....	1915	10.50	11.75	14.00
Ford Runabout.....	2p.....	1916	10.50	11.75	14.00
Ford Runabout.....	2p.....	1917	10.50	11.75	14.00
Ford Runabout.....	2p.....	1918	10.50	11.75	14.00
Ford Couplet.....	2p.....	1915	13.50	15.00	19.25
Ford Couplet.....	2p.....	1916	13.50	15.00	19.25
Ford Cloth Sides					
Couplet.....	2p.....	1917	13.50	15.00	19.25
Ford Glass Sides					
Couplet.....	2p.....	1917	13.50	15.00	19.25
Kick Pad to match for Fords only ..		2.90	3.00	3.80	4.25
Top Slip Cover to match for Fords only ..		5.75	6.00	7.50	8.00

Top Slip Cover to cover all bows, \$1.50 extra.

### Nos. 1004 AND 1006 FORD SPECIALS



Cover the cushions, arm rests and lazybacks but do not include covers for the doors or dash pieces.

No. 1004. Made of the same material as No. 1000.

No. 1006. Made of the same material as No. 1050.

Black Gordon artificial leather arm rests. Attached with glove fasteners; cleaned with soap, water and a brush.

For Ford Touring Car.....	\$2.90
For Ford Runabout.....	5.75
Top Slip Cover.....	4.00
Kick Pad, with pocket.....	2.50

## "Powers" Anti-Draft Shields



Between the windshield and top of every Ford car there is a draft that causes discomfort to every driver.

The "Powers" Anti-Draft Shield keeps out the rain, snow and cold winds. Made of 32-oz. enameled rubber duck, with extra strong spring clips, which fasten to windshield, and with curtain fasteners and eyelets that fasten to top.

Can be installed in five minutes, removed and replaced in thirty seconds. Is made adjustable, and fits any Ford car. It adds to the looks, comfort and warmth of the car.

Each ..... \$1.25

## Fore-Door Ventilating Rod



Equal Efficient Ventilation for Doors Opening either from Front to Rear or Vice Versa

When it's too hot in your home or office, you open a door or window. The same condition exists while driving your automobile.

Why not open the door and let out the excessive heat.

Try a pair and notice the difference. Cast bronze or nickel plated. You can put them on yourself in 10 minutes.

Complete with screws, per pair.....\$2.00

## P-W Special Clock



A popular clock for automobile and motor boats. Especially adapted for Ford cars. No screws visible. 3 3/8 in. high, with a 2 1/2 in. porcelain dial. Brass or black enamel finish. One-day movement, with second hand.

Price, 1-day, each..\$3.25

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# Stewart Speedometers



## Instrument Board For Ford Cars

Model 150-A or B . . \$13

Speedometer same as Model 150 D. Instrument board is made of wood with black satin finish. Clock, switch, etc., can be installed on the board. Easily installed in one minute. No bolts, screws or brackets. Speedometer is furnished complete with driving equipment.

## Instrument Board For Sedan and Coupelet

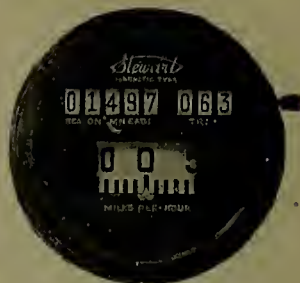
Model 150-F . . \$15

Speedometer same as Model 150 D. Instrument board is made of wood—handsome black, egg-shell finish. Fits directly under wind-shield and is held in place by five wood screws furnished. Hooded light above speedometer wired to connect with Ford lighting circuit. Complete with driving equipment.

## Speedometer and Instrument Board

Model 150-G . . \$20

De Luxe speedometer for use on Ford cars. 3-in. dial face. 60-mile speed dial, 100,000-mile season odometer, and 100-mile trip odometer, with reset device. Face of speedometer is beveled around odometer opening and figures set directly in driver's line of vision.



## Speedometer

Magnetic Type

Model 150-D . . \$11.75

SPECIAL FOR FORD CARS. 3-inch dial. 60-mile rotating speed dial. 100,000-mile season register. 100-mile trip register. Can be reset to any mile or tenth of a mile. Complete with driving equipment for Ford cars.



150-F

## Speedometer Gears



The small gears on the end of the speedometer shaft are made from fibre and they wear out frequently. We can supply duplicates of gears for the Stewart speedometer and they come in two styles. New style fastens with nut, and old style with cotter pin. Be sure and specify which style is wanted when ordering.

Each .....\$0.30

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



# Veeder HUB ODOMETER FOR FORD COMMERCIAL CARS



Makes the Ford truck work for less by making it account for fuel, oil, tires and other maintenance items. The Ford equipped with a Veeder gives exact records of mileage to check against fuel, oil, tires, repair costs, etc. This means mileage at less cost, because the owner can watch every expense and stop every extravagance.

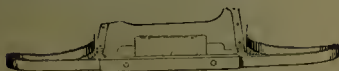
The Veeder Ford Model Odometer is essentially of the same construction as the regular Veeder for large trucks. As the Veeder Recording Mechanism is built for service on big, heavy trucks with solid rubber tires where the jar and wear is terrific, this mechanism is equal to unlimited service on the light running pneumatic-tired Ford. The Veeder registers mileage so it's always readable; always totalled up whether truck runs backward or forward.

When ordering, state model, year and size of front wheel.

Price, each ..... \$15.00

## FORD BUMPERS

### **Hartford** SPRING BUMPER The National Guard for Motor Cars



From end to end, a powerful, yet resilient spring. It carries the BLOW of collision—and absorbs the SHOCK.

Made of finest tempered spring steel. Practically unbreakable. Each end a true loop-spring—the most efficient form of shock-absorbing spring.

In collision, the HARTFORD "gives" just enough to take up the shock. Then it tends to thrust away the obstruction and springs back to normal shape.

It prevents battered radiators and shattered lamps; buckled fenders and broken springs. Protects passengers from injury. Guards car mechanism from shock.

One "bump" may cost many times the HARTFORD'S price. While the HARTFORD lasts for years—and may save its cost every day.

A real ornament to any car. Makes it look "completely equipped." Safer than insurance; cheaper than repairs.

Ford type, black, each ..... \$10.00  
Ford type, nickel, each ..... 11.50



The Gemco Frame-Type Bumper for Fords is a very attractive bumper, inasmuch as its brackets are an imitation of the front end of a chassis frame similar to those used on more expensive cars.

It will give elegant symmetrical lines and the appearance of a longer wheelbase and greatly enhance the beauty of Ford car.

The Gemco frame-type bumper clamps to the frame only, and consequently cannot become loosened by the action of the spring.

It can easily and quickly be attached by any one, without any trouble whatsoever—no bolts need be removed—no holes drilled or any mechanical changes made.

The brackets are very substantial in construction; the bumper itself is compact and strong and furnishes ample protection.

#### Price

1¼ in. channel bar, nickel finish, each... \$8.75

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

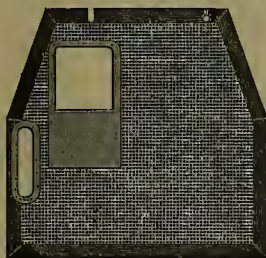
## Special Tire Cover



Made of black enameled drill, fastened with snap buttons and inserted with a flat metal spring in the flap which makes the cover fit smoothly and insures the tire against water or dust. Made only in small sizes up to 30x3½ in. inclusive, for plain tires also regular demountable rims. Furnished with plain buttons and boxes.

Price, each ..... \$1.50

## Rubber Mat

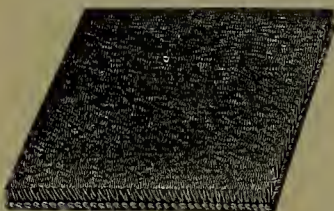


State year of car.

These rubber mats are especially made to fit the Ford cars. Made of a very fine grade of rubber matting, and are similar to the kind originally furnished with the Ford car. They are reinforced where the heel rests while using the pedal. Furnished with the regulation holders and the proper pedal and shifting lever openings.

Price, each ..... \$2.25

## Fibre Tonneau Mats



The best tonneau mat for an automobile. Car can be cleaned in a moment. It keeps the feet dry; warm in winter, cool in summer. Are made of best quality imported fibre. Size 28x30.

Each ..... \$6.00

## Allen Tire Covers



Allen Tire Covers are made of the very best quality enamel duck and are designed specially for use with the Ford car. They are fastened with glove fasteners and can be put on or taken off in a few minutes.

An inner tube bag is furnished with each cover.

Clincher, 30x3 and 30x3½ ..... \$3.50

Demountable, 30x3½ ..... 4.50

## Steering Knuckle and Cardan Joint Boots for Ford Cars



Knuckle Boots for cross-rod bearings.

End Thrust Boots for hearings at the ends of thrust rod connecting from steering post and to the arm of the steering knuckle. Made of leather.

Price, per set ..... \$1.50

## Starting Crank Holder



The aluminum starting crank handle makes more noise when the car is running than any other three parts of the car. The holder keeps this quiet and also keeps it clean.

Price, each ..... \$0.40

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## PUMPS

The Anthony Pump is always ready to fill a tire quickly and easily, is never out of order and will last forever, is simple in design, but every detail is perfect. A few features are: A handle that can be gripped and that cannot work loose; a piston rod that cannot bend or spring; a piston cup leather that gives perfect compression; a perfect valve constructed entirely of metal, perfectly balanced, absolutely airtight and impossible to get out of order; an action so smooth that not an ounce of labor is wasted in operation.

Size  $1\frac{1}{2}$  in. x 17 in., each .....\$4.00

The Crown Pump is a high class single action pump, very serviceable for small size tires. The cylinder is made from heavy selected seamless brass tubing. It has a heavy cast base and removable screw cap.

Size  $1\frac{1}{4}$  in. x  $17\frac{1}{2}$  in., each .....\$1.50

### Badger "All-Steel" Jack

The All-Steel Jack is a light, strong, compact ratchet jack for cars weighing two thousand pounds or under. It has no competition for Ford cars. Every part is formed from cold rolled steel. The pawls are case hardened and carried on short stocky rivets. The jack is operated by only one spring.

Height, 10 in. Raise, 5 in. Weight,  $2\frac{1}{2}$  lbs. Capacity, 1000 lbs.

Price .....\$1.25

### Klaxon Horns

The Klaxon 6 is the only high grade and thoroughly efficient motor-driven horn to be sold at a low price; same is furnished complete with wire and push button. Length,  $9\frac{1}{2}$  in.; diameter of bell,  $4\frac{1}{2}$  in., oval. Finished in black only. Klaxon 6 Horns are intended for under the hood, but can be used anywhere.

Price, each .....\$7.35

#### Klaxon 3

#### The Fordalarm

A hand operated Klaxon safety signal with horizontal push rod.

Finished in the smart "Klaxon Black" enamel. No polishing necessary. Suitable and easily attached to all Ford touring cars, runabouts and commercial cars without front door panels.

Price, each .....\$4.20

#### Klaxon 3-V

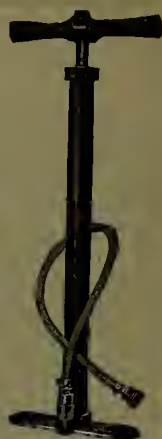
A hand operated Klaxon safety signal with vertical push rod. In every other respect the same as the Klaxon 3. Finished in "Klaxon Black" enamel.

Price, each .....\$4.20

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



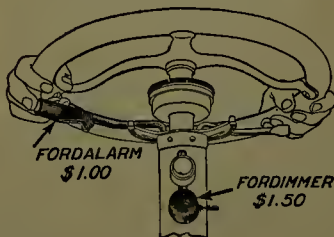
Crown Pump



Anthony Pump



Badger Pressed Steel



If you study the cut you will see at once the great advantage and convenience of the Fordalarm, and that it removes the danger of taking the hand from the wheel in crowded thoroughfares, when the driver should concentrate all his attention on steering the car.

It is a button mounted just beneath the steering wheel, on the end of the gasoline control lever. In emergencies the driver's hand is usually on this lever, and the second finger of the hand is always in position to press the alarm button, if necessary, and sound the horn. There is no necessity of taking the hand away from the lever, as ordinarily in Ford cars; in fact, it is easy to advance or retard the gas and sound the alarm at the same time.

Each .....\$1.00

## Combination Rear Tire Holder and License Bracket

A Complete and Practical Outfit that Will Appeal to Every Ford Owner



The original "Gemco" No. 99 Ford Rear End Tire Holder made a decided hit. Thousands of them are in use to-day on all Ford models. We have greatly improved our original article and now have to offer a substantial Rear End Tire Holder that in addition to rigidly carrying either one or two tires, has in combination with it a supporting bracket to which the license bracket is attached and which also supports the Tail Light and carries it in the proper position. The cut shows all these details clearly.

The Hook is very substantial and clamps to the joint formed by the intersection of the rear frame and spring. The two properly bent extension steel arms hold the tires firmly and in a vertical position. The strong feature of this popular Tire Holder is the fact that it is attached to the car at one place only and that it is not necessary to drill any holes or make any mechanical changes to apply it, which can be accomplished in less than ten minutes. Furthermore the Tire Holder is universal and will fit both roadsters and touring cars. In addition to its other advantages it improves the appearance of the car and apparently gives it a longer wheel base.

No. 95—Complete as per cut, with straps.....	\$5.50
No. 105—Extra Heavy, for Demountable Rims.....	6.00

## Torpedo Tire Holder

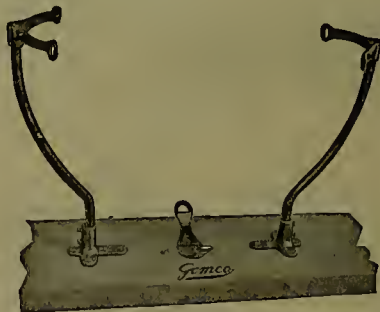


This Tire Holder is recognized as one of the neatest and most practical for carrying spare tires on the running board. This particular number has been designed especially for Ford and other cars which are equipped with small tires up to 3½ inches. It bolts firmly to the running board, is very rigid, attractive and elegantly finished.

Made in two styles, one for carrying single tires, the other with hinged terminals for two tires.

No. 27—For one tire, complete with straps .....	\$3.50
No. 28—For two tires, complete with straps .....	4.20

## Ideal Running Board Tire Holders



This Tire Holder has been designed especially for Ford and other small cars using tires up to 3½ inch. It is contained entirely on the running board and when properly fastened holds the tires rigidly in position. It is substantial, neat, easily attached and low in price.

Finished only in black enamel.

Illustration shows No. 14, which is intended to carry one tire.

The same Tire Holder is also made with folding terminals to accommodate two tires.

No. 14 .....	\$2.60
No. 15 .....	3.00

Equipped with two shoes instead of clips, add \$0.75.

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME. •



## RUNNING BOARD TIRE HOLDERS

### No. 1. For use on Runabouts

The top Holder is made to fasten on bow support bracket with set screw as illustrated. Securely holds two Tires and does not interfere with bow or straps in any way.

Bottom Holder is riveted to running board, the drilling of two small holes being the only work required. Metal straps, much more serviceable and satisfactory than leather, are used on both holders. The Top one is fitted with bolt and thumb nut, while provision for a lock has been made on the Bottom Holder.

They are manufactured from cold rolled steel and exceptionally light yet strong and serviceable.

Furnished complete with rivets, screws and nut in black enamel finish. No lock supplied.

Price, per Pair .....\$1.50

### No. 2. For use on Touring Cars

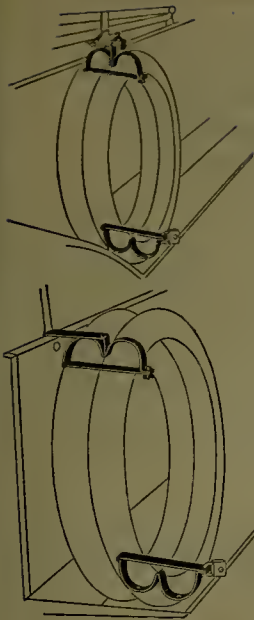
These Holders are essentially the same as those described above, excepting that the top one is fastened between windshield brace and body of car (with bolt already in place).

The bottom holder is identical to the one used on Runabout with which, as noted, two Tires may be easily locked in position.

While designed principally for the Touring Car, they may be used on Runabouts with equal success and satisfaction.

Furnished complete with rivets, screw and thumb nut in Black Enamel finish. No lock supplied.

Price, per Pair .....\$1.50



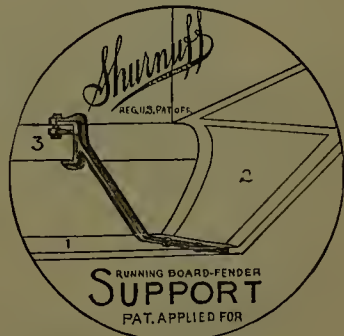
THE BADGER SIDE TIRE CARRIER

This Tire Holder is an inexpensive, practical carrier, designed to carry one or two tires with or without demountable rims, or a wire wheel.

It supports the tire at three different points, thus always holds them in their original position. The upper bracket holds the tires in such a rigid manner that there is no swaying or wobbling to rack the running board and fender. The tires are always in view of the driver and are protected against the splash of mud and water when the car is in motion.

Price, each .....\$1.50

## Shurnuff Support



1. Running Board 2. Front Fender. 3. Chassis Frame.

The sagging of the running board of Ford cars and the vibration of the running board and front fender is due to the lack of support for the front of the running board, such as is found in practically all of the higher-priced automobiles.

The Running Board-Fender Support eliminates all this by holding the running board stiffly in place and stops practically all vibration of the front fender. The rattles and squeaks are also stopped.

One pair of Running Board-Fender Supports are packed in corrugated board box, making a neat display on the shelf.

Pair .....\$4.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



# **★ Hartford**

## **SHOCK ABSORBER**

**"MAKES EVERY ROAD A BOULEVARD"**

Yes, sir, makes every road a boulevard to you! Little, light car, or big, heavy car, the Hartford Shock Absorber gives just the reserve-spring-power needed to ride over the bumps of bad roads like a rocking-chair:

Down between the springs and the frame of your car the Hartford lies on guard with one eye watching for the jolts and jars too big for your springs to absorb. When one comes—or when a whole series come, it just steps into the game, gathers in the shock and gives that shock so much work to do that the jounce is taken right out of it before it reaches the frame of your car and you.

The Hartford Shock Absorber is letting more than 375,000 motorists get much more comfort out of riding than you are getting—more security from breaking springs than you are getting, and much more tire mileage. Ninety-eight per cent. of all the racing drivers use Hartford Shock Absorbers. You're missing something every day you do without them.

### **Complete Fittings**

Each set of any of the six models is complete and ready to apply. It includes the special fittings and the necessary bolts, nuts, spring washers, etc., and a detailed blue print showing method of application. When ordering, please give the make, model and year of your car.

Ford Set of three; one front, two rear ..... \$24.00

**"MONEY BACK IF NOT SATISFACTORY"**

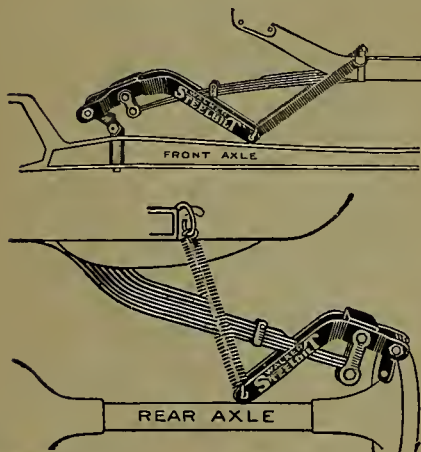
## **WALKER STEELBILT SHOCK ABSORBER**

Made of steel throughout, arms, rear perches, hooks and bolts. They are lighter, stronger and unbreakable. The springs are oil tempered spring wire, extra long and more resilient, therefore giving improved riding qualities.

The spring bolts are supplied with oilers which give perfect lubrication. They are turned from cold rolled steel and hardened, and not the common carriage bolt so often furnished with other makes of cantilever shock absorbers. The centers of leverage are arranged to give free action to the coils and leaf spring alike and also prevent the spring from striking the axle.

Walker Steelbilt shock absorbers are free from sliding parts. Friction is reduced to a minimum and the factor of safety, on account of all parts being steel, is raised to the maximum.

Guarantee goes with each set. Directions for installing are packed in every carton. Price per set of four touring or roadster....\$7.50



No. 124

## **GEMCO "NOISELESS" MUFFLER**

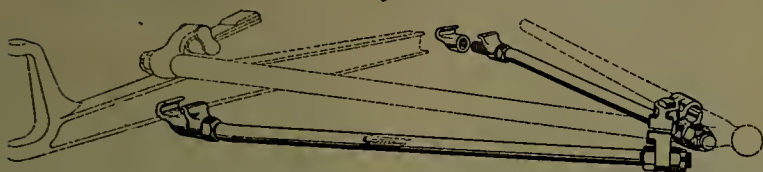
It is the very muffler you have been wanting for years. You are sure to be satisfied by the manner in which it silences the exhaust. A special and exclusive feature is the substantial deflector. Note illustration.

This muffler is made of 20-gauge steel and finished in black enamel. It is 5 inches in diameter and 14 inches long, 2 inches longer than the one furnished by the Ford Co.

Price, each ..... \$1.80

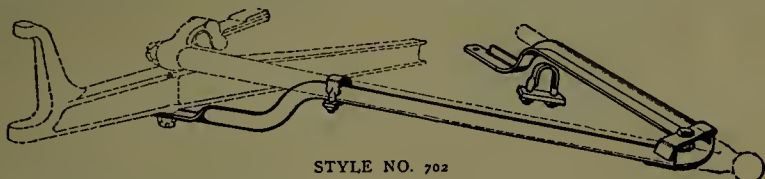
**ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.**

## Walker Ford Auxiliary Front Radius Rods



Ford owners have a great deal of trouble with radius rods breaking, rattling, etc. This can all be overcome by reinforcing the regular rods with a set of Walker Auxiliary Rods. They are made from strong steel tubing and mounted on each end by clamps which fasten at one end to the "V" shaped stud near the ball socket and at the other to the lower side of the axle. These Auxiliary Rods keep the axle true and straight, make steering easier, lessen vibration and save the cost every little while of new radius rods, and other repair work.

No. 701. Price, complete ..... \$4.00

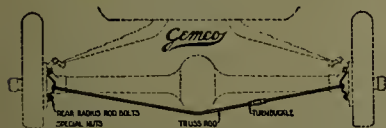


STYLE NO. 702

This is another type of auxiliary radius rod that is very practical and popular. Easily attached and very substantial. Made entirely of pressed steel. It keeps the axle true and straight, making steering easier and saves its cost many times during the year in repair bills.

No. 702. Price, complete ..... \$2.50

## Rear Axle Truss Rod



A re-enforcement to the Ford Rear Axle that prevents sagging, loosening of housing rivets, and stripping of Gears. The "Gemco" Truss Rod or Axle brace can be very easily attached. Makes the Axle as solid as if made from one piece, as the brace holds the differential steady in the center and keeps it in alignment with the wheels.

Price, complete ..... \$1.65

## Front and Rear Fender Braces



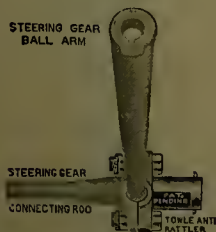
These braces are designed to prevent vibration of the fenders, thereby stopping a lot of squeaks and rattles caused by these parts, and also increasing their life.

Made of steel, enameled black, and furnished with bolts and nuts.

Front, each ..... \$0.15

Rear, each ..... .10

## Steering Rod Anti-Rattlers



No.	No. 165	Each
165 Black hard rubber finish		\$0.30
165 Solid bronze		.40

## Torsion Rod Anti-Rattlers



No.	No. 164	Each
164 Black hard rubber finish		\$0.30
164 Solid bronze		.50

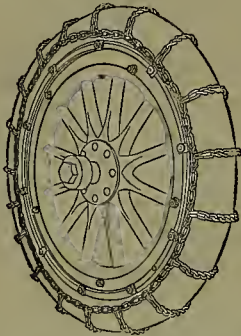
## Anti-Rattling Brake Rod Supports



No.	Per pair
166 Black hard rubber finish	\$0.50
166 Solid bronze	.80

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

Weed Chains for Ford Cars



Most Necessary Protection to Road Users  
Will eliminate dangers—will safeguard the occupants  
of your car. Two complete chains in a set.

WEED CHAIN TIRE GRIPS

Size, 30x3 in. Price, per set.....\$5.65  
Size, 30x3½ in. Price, per set..... 6.20

RID-O-SKID CHAINS

In Rid-O-Skid Chains we offer an anti-skid to meet  
the requirements of those to whom price is the chief  
consideration. They are necessarily of inferior quality.

Size, 30x3 in. Price, per set .....\$3.75  
Size, 30x3½ in. Price, per set ..... 3.95  
Weed Chain Adjusters, per set ..... 1.30

WEED CROSS LINKS

3 in Price, each .....\$0.07  
3½ in. Price, each ..... .09

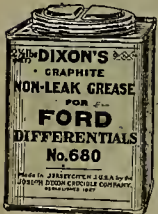
Emergency Mud Hooks



Every motorist should carry a set of Emergency Mud  
Hooks. They can be put on while wheels are in deep  
mud, and will surely pull you out. They can be taken  
off after out of the mud. You can easily dispense with  
chains if you carry a set of these. Made of malleable  
iron and cannot break.

Price, per set, with straps .....\$1.25

Graphite Grease

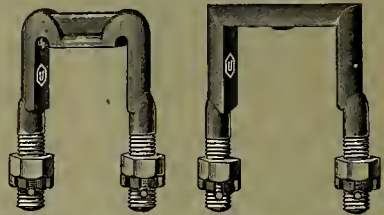


No. 680

To be used in differential housing.  
Will not leak out from the ends  
of rear axle on to the brake bands  
and wheels. Do not use it in trans-  
mission case. Put up in 2½ lb.  
pails.  
Per pound .....\$0.40

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

Spring Clips  
Model T Ford



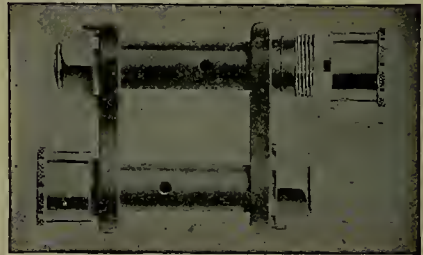
Front

Rear

Threaded, drilled for cotter pins, jappanned and equip-  
ped with castellated nuts and cotter pins. Packed 25 in  
a box.

Price, each .....\$0.40

Spring Shackle Bolts with  
Grease Cup Attached  
For Ford Cars



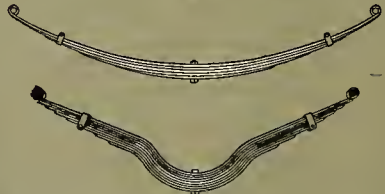
These are furnished in two sizes for front and rear of  
Ford cars.

Price for shackle complete, as shown, with No. 000  
brass grease cups, hexagon nuts and lock washers:

No. 106. Front. Price, each .....\$1.75

No. 107. Rear. Price, each ..... 1.75

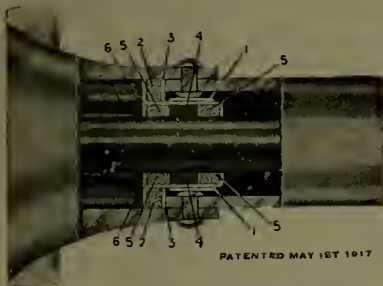
Car Springs for Ford



No. 102 Model T Front E Guar..... \$6.50  
No. 100 Model T Front A Not guar..Price on application  
No. 105 Model T. Rear Stand. Tread Special....\$14.00  
No. 106 Model T Rear South. Tread Special.... 16.00



# Shurnuff GREASE RETAINERS



1. Steel Cup. 2. Large Felt Washer. 3. Large Steel Retaining Ring. 4. Asbestos Washer. 5. Small Felt Washers. 6. Small Steel Retaining Ring.

The Shurnuff Grease Retainer consists of 3 extra high grade felt washers and one rubber asbestos washer. A cold drawn steel cup and 2 retaining rings. When assembled, as shown in cut, it will absolutely stop grease leaks.

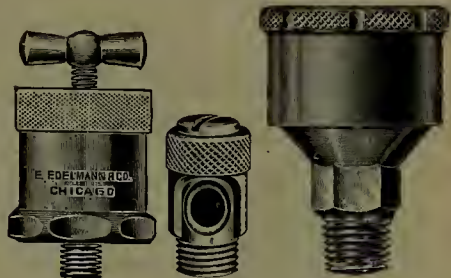
Retainer remains stationary; the two rivets in axle housing keep it from turning, and it does not cause wear on the axle.

Leaking grease causes tires to decay and become brittle. The brake lining is affected, causing the brakes to lose their efficiency and every auto owner should realize the importance of stopping it.

Price, per pair .....\$0.90

# OIL AND GREASE CUPS

For Ford Cars



No. 101

No. 3-N

Nos. 1-000

Style No. 101.—Takes place of ordinary type of grease cups now on Ford car. Outside diameter of cup, 9/16 in. Length overall, 1 1/2 in. Fitted with standard 1/8 in. pipe thread.

No. 101. Price, each .....\$0.25

Style Nos. 1 and 000.—These cups will fit all places where grease cups are used on the Ford car. Style 000 will fit the rear axle. Style No. 1 is intended for use on the knuckle joint. These cups are the standard pattern, made of stamped brass, accurately made and superior to the ordinary steel usually furnished.

No. 000. Thread 1/8 in., each.....\$0.25

No. 1. Thread 1/4 in., each ..... .50

Oil Cups, Style No. 3-N.—These oil cups are identical to those regularly furnished with the car. Fitted with standard 1/8 in. pipe thread.

No. 3-N. Price, each .....\$0.15

# NO. 3 UNIVERSAL GREASE AND OIL GUN



No. 3

The end of the barrel of this gun has the same thread as Ford differential, enabling the user to screw the barrel into the differential, making a leak-proof joint. Gun is made of steel, brass plated. The plunger is cork, held in place by two steel washers.

9 in. long, 1 3-16 in. diam.; capacity, 7 oz.; weight, 12 oz.

Price, each .....\$1.00

# OIL GAUGE NO. 41



Indicates the correct level of oil in the crank case of your engine. To attach you simply remove the lower pet cock from the crank case, attach the gauge and screw the pet cock back into the opening in the gauge. The bent pipe nipple gives you correct angle for the gauge.

Has metal guard for protection of glass, preventing breakage.

No. 41, each .....\$0.35

Use the "CB" Oil Gauge. Solid construction, efficient and reliable, can't clog or come apart. Place quality ahead of price. Hundreds of Ford motors have been burned out by using cheap oil gauges.

No. CB, each .....\$0.75

# C. B. OIL GAUGE



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# SHALER VULCANIZERS.

**FORD-KIT . . . . . \$2.75**

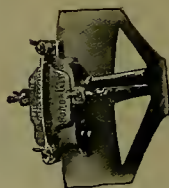
*For Ford Casings and Tubes.*

Similar in operation and capacity to the famous Vul-Kit except has surface curved especially to fit Ford size casings. No watching or regulating. Every repair is cured perfectly because the fuel supply gives just the right amount of heat. No smoke, soot, or dangerous exposed blaze. Can safely be used on a casing close under the fender.

Tubes are repaired by clamping against a flat surface  $3\frac{1}{2}$  inches square. Permanent repairs of any size can be made as quickly as a temporary patch could be stuck on.

Furnished with repair rubber and cement. Nickel plated. Weight packed 5 lbs.

Type H No. 33 Ford-Kit.....\$2.75



Type M, No. 5, with 12 Patch Heat Units.  
Each .....\$1.50

## 5-MINUTE VULCANIZER

The wonderful simplicity of this new tube vulcanizer appeals to every motorist on sight. It mends all tube punctures perfectly, making repairs far superior to any "stuck-on" patch.

Heat is produced by burning a chemically treated disc about the size of a dollar. Each of the twelve patches furnished with the outfit is complete in itself, consisting of the patent heat unit in its metal container, and the patch of raw rubber attached to the vulcanizing surface of the container. The complete cartridge, or container, is clamped over the puncture, and the heat unit lighted. In five minutes the repair is done. No danger of over-curing. Anybody can use it anywhere and do perfect work the first time. As simple as lighting a cigar.

The clamp, a dozen patches, and a piece of sandpaper, neatly boxed, comprise the outfit. Can be carried in the pocket; usually carried in the tool roll in car, ready for emergency use.

## 5-MINUTE PATCH-&-HEAT UNITS

The average user buys several packages each season, as they are used not only on tires, but on other rubber articles. Few accessories produce such a continuous resale. Packed 12 of a size in air tight cans. 1 doz. cans in carton.

No. M6 Round Patch-&-Heat Units,  $1\frac{3}{4}$  in. diameter,  
per can of 12 .....\$0.75  
No. M7 Oblong Patch-&-Heat Units,  $2\frac{1}{4} \times 1\frac{3}{8}$  in., per  
can of 12 ..... .75



## "GEMCO" 17" STEERING WHEEL

*17" Tilting Steering Wheel for Ford Cars*



There is a tremendous demand for a larger Steering Wheel than regularly furnished with the Ford car. The "Gemco" Stationary 17-inch Steering Wheel has been on the market for some time and has been a very popular seller. We have now added to this line at the demand of the trade a 17-inch Tilting Steering Wheel. These larger wheels give greater leverage and, therefore, makes steering very much easier. The Spiders are properly machined to fit the Standard Ford Steering Column.

In the illustration is clearly shown how conveniently the occupants are able to pass the steering column when the Gemco Steering Wheel is tilted; only a second is required to tilt and to again adjust.

REPLACES regular wheel without mechanical changes.  
TILTING CORRUGATED  
Each .....\$5.50



STATIONARY CORRUGATED  
Each .....\$3.90

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## Model A Schebler Carburetor for Ford Cars



A non-moving part carburetor designed especially for the Ford car and founded on entirely new principles designed to overcome the present heavy grade of fuel.

Maximum power, speed and flexibility are guaranteed and a mileage of from 22 to 28 miles has been obtained under average driving conditions.

A double choke insures easy starting under the most severe weather conditions and permits control of the mixture from the driver's seat. A low speed of four to five miles an hour can be secured without loading or missing.

Model A outfit consists of Model A Carburetor, steering column control, hot-air drum, flexible tubing, manifold gasket, two  $\frac{3}{8}$  x 16 cap screws, radiator choke wire.

Outfit complete .....\$17.00

## Ball Joint No. 13



This Ball Joint with Nut is used regularly on Ford Finner Levers, and need replacement from time to time. Tapped and threaded 7-32x32.

No. 13. Ball Joints. Price, each.....\$0.20  
No. 14. Nuts only. Price, per doz. .... .36

## Model R Schebler Carburetor For Ford Cars



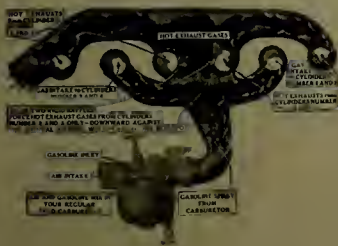
The Schebler Model "R" Carburetor and manifold attachments have been specially designed and worked out for the Ford car.

This Carburetor installation will insure easy starting, good low throttle and slow speed running conditions, quick pick-up and get-away and the maximum speed and power from the motor. Also good economy is secured by its use.

Outfit consists of: 1 1-inch R Schebler, 1 manifold, 1 steering column control, 1 hot air drum and tubing gas-line connection throttle rod.

Outfit complete .....\$18.00

## Anco Evenheat Manifold For Ford Cars



The Anco fits all size Ford engines exactly in place of old style manifolds without cutting, fitting or the use of special gaskets. The Anco is cast in one piece. No moving parts. Nothing to wear out. Swift-moving

heavy unvaporized particles of gasoline swept upward from the carburetor all strike the horizontal wall called the "hot spot," which entirely separates the hot exhaust and cold intake channels. Shattering impact and intense heat combine to force instant and complete gasification. Note carefully how each half of this wall, right and left from the centre, gets the same amount of heat, and how each cylinder gets the same high quality of gas. Gives more mileage, a cleaner, healthier engine, and smoother, stronger power.

Made of the best material, beautifully finished and so accurately machined it can be installed in twenty to thirty minutes.

Price, each ..... \$9.75

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## REMINGTON GASOLINE SYSTEM



An absolutely new system of carburetion for Fords (only). It combines the two features which appeal most to Ford owners today—better mileage and an accelerator.

The accelerator automatically opens the throttle gate and a super heating air valve, which is thus in operation 100 per cent. of the driving time without thought on the driver's part.

The hand throttle does not open the air valve, thus giving rich enough mixtures for starting easily and for idling without stalling.

After motor is started, drive with accelerator and by automatically adding super-heated aid, you get increased power, speed and mileage from your gasoline.

Can be attached in one-half hour to any type of standard Ford carburetor (Holley or Kingston).

Price, complete .....\$7.50

## SPARK PLUGS

Splitdorf

A. C. Cico



Plugs with white India mica core, rolled on a tapered steel pin in such a manner as to make them absolutely gas tight. At the same time the core can be easily removed for cleaning when fouled.

Price, each .....\$1.00

The shoulder of this plug

fits the regular Ford wrench.

A high grade plug at a low grade price.

Price, each .....\$0.75

Porcelain only ..... .35

## Champion X

Adopted by the Ford Motor Co. as standard equipment on Ford cars since 1911.

Price .....\$0.90

## Double End Spark Plug Wrench

Fits 1/2 inch plugs and 3/8-18 plugs. Made of malleable stock in black enamel finish. Special for Champion Plugs No. 1627F.



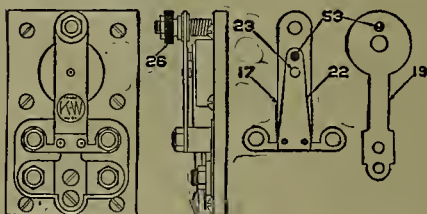
Price, each .....\$0.35



A15, 1/2 Inch

## Genuine K-W Contact Points

When replacing Contacts, use complete new springs—do not solder new Contacts to old springs, as solder destroys the contact. The springs will become bent and the "cushion effect" destroyed by putting new Contacts on old springs.



Master Vibrator Contacts .....\$2.50 pair

K-W Ford Coil, Tungsten ..... .35 pair

Genuine K-W Points come in sealed envelopes with registered trade-mark label (K-W in a circle) sealing the envelope. Look for K-W.

Beware of imitation Springs and Contacts not bearing the K-W trade-mark as these positively will not work on K-W Master Vibrators and K-W Coils.

Springs are Not Interchangeable. Ford Coil Tungsten Points will not fit on Master Vibrator.

## THE K-W "SPARKITE" CONTACT POINTS & SPRINGS

K-W "Sparkite" Contacts, made expressly for K-W Ford coil units, give a better spark at slow cranking speed and a hotter spark at any speed.

K-W Sparkite Points are larger in size, made of solid metal, insuring longer life and greater efficiency.

The result of years of research and most highly recommended where a quality contact is desired.

Price, per pair .....\$0.50

## K-W Units

For Ford metal coil boxes. These units at the price charged are far cheaper and more satisfactory than repairing the old unit.

Each .....\$2.75

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## MONARCH TIMER FOR FORD CAR



The 1919 Ford Timer far surpasses any of the previous products put out.

It overcomes one of the big drawbacks of all Timers. No other Timer has the spring action of the Monarch. This free action enables the roller to pass smoothly on all contacts. There can be no skipping, jumping or short circuiting. The variation in the recess of the Ford motor cannot interfere with the good service of the Monarch as it will with a Timer of any other construction.

The contacts and roller are of 40 deg. dynamo steel. All parts are well machined and very durable. The Timer is guaranteed to give good service and will be replaced at any time without charge or question if entire satisfaction is not given.

Price, each .....\$1.25

## MILWAUKEE TIMERS FOR FORDS



These timers have been known to the trade for years and are considered standard. Due to the many valuable and exclusive features, the demand has increased each year.

Designed especially for the Model "T" Ford and will fit all Fords since the late 1912 model.

One-piece case of high-grade steel, lathe turned and ground. The carrier is a bronze casting fitted with wide, hardened steel roller.

Complete .....\$2.00

## WINTERS TIMERS



An excellent timer designed for the Ford car. Well made of polished metal and it will give excellent satisfaction. The contacts and roller are of the hardest quality steel obtainable and the insulation is the finest non-warpable fibre.

Price, each .....\$1.25

## Wire Assembly



One lighting and four timer wires enclosed in flexible conduit, set .....\$0.75

## Connecticut Switch



## FORD TYPE.

Special design and finish to harmonize with Ford car. It has a metal button same as furnished the Ford Motor Company. Made in one point only.

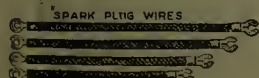
Each .....\$0.50

Velox  
Two Point  
Switch

Made especially for use in connection with electric lamps on automobiles, gas, gasoline engines or motor boats; in fact any place where one or two sets of batteries are used.

Price, each .....\$0.25

## Spark Plug Wires



Four rubber insulated and braided high tension wires to connect spark plug terminals and coil connectors on the dash board.

Set of four .....\$0.35

## Fit Ford Switch



101 Key for Metal Coil Box.....\$0.10

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

# Atwater Kent Ignition for FORDS

"If every Ford owner could ride in an Atwater Kent-equipped Ford every Ford would be Atwater Kent-equipped."

The wonderful performance of this remarkable motor when equipped with the same high-grade, modern ignition equipment, which has displaced the magneto on thirty representative American cars, is truly a revelation.

Imagine running through crowded streets at three or four miles per hour in "high" and at the first opening in traffic accelerating with all the smoothness and rapidity of a light "six" up to the limit of your speed, without changing gears or touching the spark lever!

The Atwater Kent is the one scientific ignition system which produces a single hot spark, uniformly hot and exactly alike in each cylinder, no matter whether the motor is being cranked slowly or is running at forty-five miles an hour.

The automatic spark advance, which is only one feature of the Atwater Kent System, makes the motor self-regulating. Spark is always safely retarded for starting, automatically advanced for high speeds and automatically retarded for low speeds and hill climbing. The driver can forget the spark lever and control the car by means of the throttle alone, leaving both mind and hands free. No danger of stalling the motor due to advanced spark.

By means of this system a better motor performance is obtained than with a high-tension magneto—gear shifting is reduced and absolutely synchronous ignition is obtained.

Atwater Kent Ignition is the only ignition system which consumes so little current that a storage battery is unnecessary. Ordinary dry cells may be utilized, a single set of which will give upwards of two thousand miles of efficient service. Uses less than one-tenth the current consumed by other ignition systems.

The Atwater Kent Ignition System for Ford cars is made in two forms: Type "K-2" with Automatic Spark Control and Type "H" for use in connection with the regular spark lever.

The Atwater Kent Coil is furnished with either a substantial Kick Switch, which may be foot-operated, or with a Plate Switch, somewhat cheaper and simpler in construction, if desired. There are no moving parts in the coil, and the absence of the noisy vibrating coils with their fussy and delicate adjustments is an especially noticeable feature of this system.



Type "K-2" Ford Unisparkler Complete



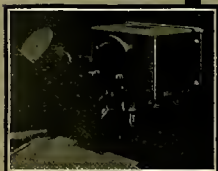
Type "K-2" Unisparkler on Ford Motor



Type "H" Unisparkler with Bracket



Type "H" Unisparkler on Ford Motor



Kick Switch Coil on Ford Dash

**Type "K-2" System for Ford Cars, with Automatic Spark Advance, including Kick Switch Coil ... \$37 Including Plate Switch Coil ... \$35**

**Type "H" System for Ford Cars, without Automatic Spark Advance, including Kick Switch Coil ... \$30 Including Plate Switch Coil ... \$28**



Plate Switch Coil



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## THE TABER COMBINED CUTOUT AND MUFFLER



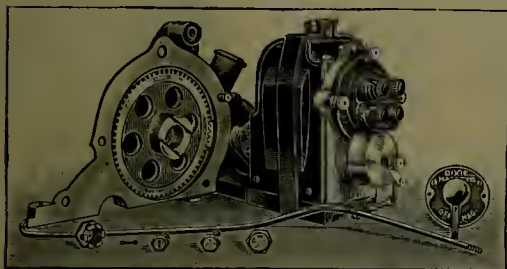
A newly patented device for Ford cars. Does away with the danger of muffler blow-outs. It minimizes back pressure. Keeps the motor running sweet and clean under all conditions. It does away with carbon. Is mud proof and rattle proof. It helps starting in all kinds of weather and tends to economize on gas consumption. Easy to install.

Complete outfit consists of patented cut-out and muffler, wear proof pedal, strap iron support, tail pipe, 5½-inch coil spring, wire leader and full directions for installation.

Outfit complete, each ..... \$4.85

## DIXIE HIGH-TENSION MAGNETO

### FOR FORD CARS



The Dixie High-Tension Magneto for Ford cars is a high tension magneto of special construction to meet the special demands of Ford cars.

With its noiseless enclosed gear-driven installation on a Ford (no chains or open gears) the nuisance and expense of vibrators, coils and batteries pass into the discard and a high tension system of ignition is secured that is second to none.

The Dixie—enclosed direct gear driven—High-Tension Magneto adds greatly to the efficiency of a Ford motor in that it delivers a hotter spark at low speed to make starting a quarter-turn certainty, and throttling down a comparatively easy proposition. It gives a "pick-up" and "get-away" to the motor hitherto unknown.

Magneto, base, gears and gear housing, switch, wires, terminals, spark advance rod, plate for dash and all bolts and screws necessary are put up in a single box with full installing instructions. No machine work is necessary.

Complete, ready to install ..... \$60.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

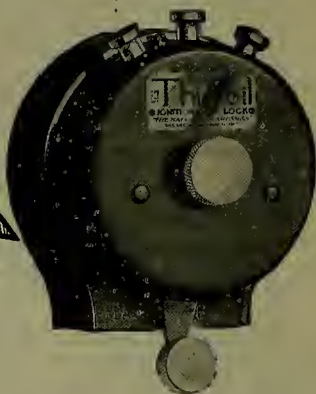




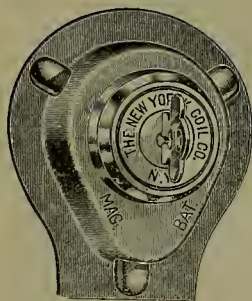
For  
Ford  
Cars  
Only

**T**HERE is no dial on the Thiefoil Ignition Lock that must be carefully manipulated. With gloved or ungloved hands the Thiefoil may be operated in half the time of an ordinary key or combination lock. It can be attached to any Ford in two minutes times. The wiring arrangement needs not be changed. No special tools are required. A thousand workable combinations are possible with the Thiefoil Lock. The owner may choose the one that suits him best. You can sell this lock to every Ford owner in your territory. Write for prices and full information.

**PRICE**  
**\$3.50**



### "Security" Switch Lock



FOR FORD CARS.

IS ENTIRELY  
UNLIKE ANY EX-  
ISTING DEVICE.

There is no other switch just as good or similar in construction.

A strong steel plate containing a non-pickable barrel lock, far superior to anything now on the market.

A different key is absolutely necessary for each lock.

It is installed by removing the name plate and attaching with three screws. Ever after, these screws are entirely concealed and protected.

It is impossible to remove the lock, switch or "beat" the lock in any manner.

Proper key **MUST** be obtained to remove plate or operate the switch.

The unusual feature that strongly appeals to you is the fact that your present switch is **NOT** disturbed—the wires and attaching bolts remain just as they are at present.

No possibility of wrong connections or difficulty of replacing bolts, screws, etc. No chance of loose connections, bad contacts and similar troubles, often occurring when a complete new, so-called Lock Switch is installed.

Each .....\$3.25

### The K. W. Auto Lock

Approved by the Underwriters Laboratories, which means a saving on insurance rates.

Protects your car against theft; the unauthorized use of your car when left in garages; is even proof against your self negligence, because you must lock your car to stop your engine.

Without the key it is impossible to operate the switch. Removing the screws will not remove the lock until your key is inserted.

Provision is also made for locking the units in the box.

Impossible to wire around autolock switch, as entire ignition system is automatically short circuited when switch is turned off position.

Price, each .....\$3.50



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## PERRY AUTO-LOCK



A Perry lock is the most secure lock on the market for Ford cars. It can be installed by anyone without special tools in fifteen minutes.

When locked your steering wheel is temporarily disconnected from service and a twist will spin it like a top. Without means of steering, your car cannot be driven or towed away, yet in cases of emergency it can be pushed for a short distance, thereby complying with all police ordinances.

These locks are recommended by the Underwriters Laboratories and insurance companies allow at least 15 per cent. reduction in rates where Perry locks are used.

Equipped with Yale locks, pin tumbler construction.

Price, each ..... \$6.50

## GOODRICH STEERING COLUMN LOCK

It has the appearance when locked of being a single metal connection between the steering column and the wheel. There isn't a bolt or screw exposed and the construction is so strong as to defy attempts to pry it apart or to cut it off.

By means of the exclusive clamping feature it virtually becomes an integral part of the steering column. No boring of holes is necessary. It is installed quickly and easily by means of four screws, the heads of which are completely enclosed when the device is locked. It does not change the construction of your steering column in any way.

The cylinder is built by Yale and there are no two keys alike—yours has no duplicate.

A single turn of the key locks the steering column. Your car cannot be driven, because the front wheels are held rigid in one position. The car can be pushed forward or backward in a straight line in case of fire or accident, but it cannot be driven or towed away.

It fully meets the demands of the law without the sacrifice of efficiency.

For Ford cars, each ..... \$7.25



## SECURITY AUTO THEFT SIGNAL

The Theft Signal is a shackle of great strength which attaches to the front wheel of your car. It is made of nickel plated, heat treated metal and is so designed that when attached to the front wheel of your car it projects about 6 inches beyond the outer edge of the tire, tapering to a sharp point at the end.

It is not claimed that the theft signal locks your car so it cannot be stolen, but rather that it provides such an obstacle to the smooth running of the car that should any one attempt to drive the car with the lock attached it would attract so much attention that they would be immediately stopped. The pointed end makes a clearly defined mark in the road so that the thieves can be followed, and the fact that it projects 6 inches makes such a noise when it strikes the pavement that it attracts general attention.

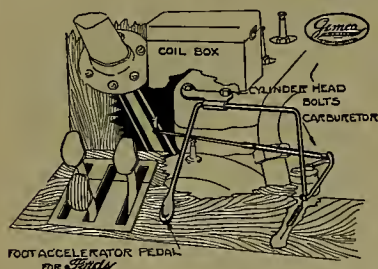


When ordering state whether lock is to be used on plain non-skid or cord tires, rims or wire wheels. The proper style should fit the tire and rim closely but should not be tight.

PRICE: 3 inch Tire Size ..... \$7.00  
3½ inch Tire Size ..... 8.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## Gemco Foot Accelerator for Fords



Foot control of the carburetor is by far the most satisfactory method. It enables the driver to get the car under way very much quicker than with the hand control and leaves the driver free to use both hands for steering. Foot acceleration is also more practical and more convenient to operate. The "Gemco" Accelerator is positive in action, quickly attached, easy to operate and there is nothing to get out of order.

Cut shows method of attachment. Full instructions furnished with each outfit.

Price, complete .....\$1.30

## Rives Neverslip Pedal Pads

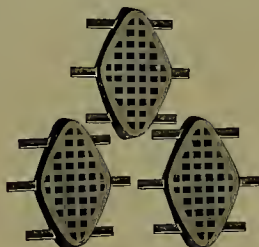


FOR FORD CARS.

Note the patent metal attachment. Prevents feet from slipping and serious accidents. Made of the finest grade of rubber; full of life; gives a firm grip and will not wear the soles of the shoes. These are not to be compared with the cheaper grade of Pedal Pads.

Set of three .....\$0.50

## Rubber Pedal Pads



For Ford Cars

They are made from real live, soft rubber, not composition or paper mache. They eliminate the vibration that comes from the engine and prevent the feet slipping off the pedals. These act a good deal like rubber heels and they are fastened in place by simply clamping the steel strips around the foot pedals.

Price, for set of three .....\$0.50

## Badger Cutout Outfits



Each outfit consists of valve, pedal, pulley, cable and spring. The valve is leak-proof and is so made that when closed the exhaust can not be heard. Can be attached in a short time.

Outfit complete .....\$1.00

## The Easy Back Pedal

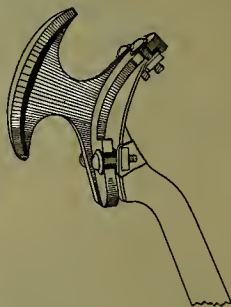
The right pedal at the right time. An extension for the reverse pedal which makes the backing of your Ford easier and safer.

Having the reverse pedal extend beyond the others makes it impossible to press the wrong pedal.

Acts as a foot guide when driving at night or in heavy traffic.

Easy to attach. Simply clamps on the regular reverse pedal.

Price, each .....\$0.75



## Exhaust Deflector



Clamps around the end of exhaust pipe and prevents the gases from injuring the paint or spare tires on the rear of the car. Particularly adapted to Ford cars owing to the short exhaust pipe. Can be turned in any direction.

Price, each .....\$0.30

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## Radiator Cap



Fits radiator cap opening; gives car an individual and pleasing appearance.

Made of hard rubber.

Price, each .....\$0.50

## Hub Cap



Standard size for Ford hubs. Made of highly polished brass.

Price, each .....\$0.35

## Ford Valves with Oversize Stems

Oversize Valves, very best quality, head electrically welded to stem, 1-64 in. oversize, each .....\$0.25

## Home Valve Adjusting Lock Nuts

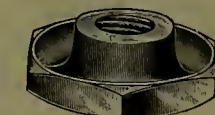


**HOME LOCK NUT**  
Patent Adjuster for

Screw on the ends of the valve stems, and can be adjusted to take up all wear on stems and push rods on the Ford T motor. They also put an extra tension of about 1/4 inch on valve springs.

Note: Old valve stems are to be cut off 3/16 inch and threaded only 1 inch from end with 5/16-18 thread. The lock nut is made from tool steel and case hardened.

Price for complete set of lock nuts and spring seats for eight valves. Set, each .....\$1.50



**Home Valve Spring Seat**



## Shims for Ford Cars

Every Ford dealer should carry in stock these packages of shims, which are cut special and of the proper varied thicknesses to obtain the correct adjustment on crank shaft bearings. Packed 100 in screw-top cans.

Each .....\$1.50



## Locking Device



For use on rear compartment of runabout. So formed that when attached and lock is placed in position none of the screws can be reached in any way. Very effectual for preventing the theft of tools, inner tubes, etc., usually carried in that section of the car.

Furnished with necessary screws and nuts for attachment. No lock supplied.

Price, each .....\$0.50

## "Fordloc"



The Fordloc is a positive, substantial, handsome lock, made of brass, highly polished and buffed, of the favorite six-lever variety which can be made in practically an unlimited number of key changes, all parts machine fitted; phosphor-bronze springs, self-locking, all spring shackle and equipped with two nickel-plated flat push keys. Locks the spark and throttle levers together.

"Fordloc." Price, each .....\$1.00

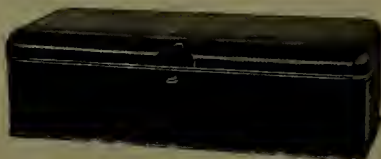
## FORD STYLE GLOBE BOXES



Designed especially for use on Ford foredoor cars but popular with other owners of small cars. The depth of these boxes allows doors to clear them easily. The cut shows the general shape and appearance of all four sizes, but the two smaller sizes have only the center lock, no catches.

Number	Size Inside	Price
B1886	17 7/8 x 7 15-16 x 6 3/4	\$3.15
C2086	19 7/8 x 8 3/4 x 6 3/4	3.40
B*2296	22 x 9 x 6 3/4	3.25
B*2416	23 1/8 x 9 13-16 x 6 3/4	3.50

\* This box has two suit-case catches in addition to lock.



Designed to meet the demand for a box that combines strength of body with permanence of finish and at the same time can be sold at an attractive price.

Note the convenient lid lifter.

Special globe locking device. Unlocks by pulling key toward you. After inserting key it presses through the lock spring, which is engaged with the cover catch.

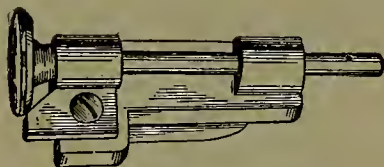
A half turn either way then unlocks it.

Type	Size Inside	Price
R-2296	22 in. x 9 in. x 6 3/4 in.	\$2 50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## VALVE GRINDERS, SPRINGS, ETC.



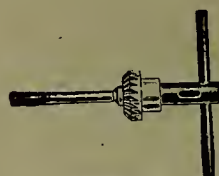
**VALVE REFACTOR**

This tool is the best and most practical Ford accessory offered and is an absolute necessity to all Ford owners. Consists of a special constructed base and frame fitted with a drop forged steel knife as illustrated.

To operate put a drop of oil on the valve seat. Place valve in the grinder as the above illustration, with the valve against the knife. When in position, take any grinding tool with the poppet projections and one or two turns will grind your valves as good, or better than any professional garage man or mechanic.

We guarantee our Ford Refacer and Grinder to increase the power, insure perfect compression and to effect a material saving in gasoline. It eliminates the necessity of putting your car in incompetent mechanic's hands and having it laid up for days or weeks. Will last indefinitely, as there is absolutely nothing to get out of order. Very simple to operate and the knife, which is the only wearing part of the device, can easily be resharpened. Pays itself on the first set of valves. Fully guaranteed.

Price, each .....\$0.50



**VALVE RESEATER**

Makes a new seat at the proper angle and in less time than it takes to grind the valve. This is the most valuable tool you have ever had in your shop for Ford use. It consists of a steel cutter and guide that will give an accurate seat by a few turns of the handle. When the valve seats are pitted it is practically impossible to prevent leakage. The cutter of this reamer, will positively true the valve seat, and, in addition to preventing loss of compression, adds materially to the power of the motor. Made of the finest tool steel, accurately machined and highly finished. Absolutely guaranteed.

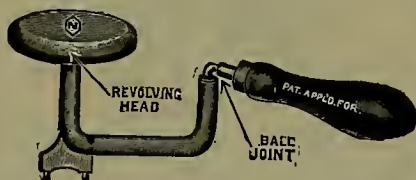
Price, each .....\$0.75



**VALVE GRINDER NO. 2**

This tool was designed to meet the demand for a simple and efficient valve grinder for these cars and the sale that it has had shows us that it fills the want.

Price, each .....\$0.50



**VALVE GRINDER NO. 1**

The easiest operated Valve Grinder on the market. Instead of the usual elbow and wrist breaking motion employed, it is operated by a direct pull and push motion, the ball joint taking care of all upward, downward, or side motions, so that the hand may be moved in a natural manner.

The revolving brace grip or head is sufficiently high to prevent striking the fingers with the handle, yet is low enough to enable the operator to grind the No. 8 (which is the last valve and practically under the dash) as quickly and easily as any of the other valves.

Made of steel, white plated, with black enameled wood handle and grip.

No. 1. Price, each .....\$1.00



**VALVE SPRING**

To replace springs, which through continual use or other causes break very frequently. Made of high grade crucible steel wire, oil tempered.

Each .....\$0.10



**VALVE SPRING REMOVER**

This is the only remover on the market that will successfully and easily remove the valve springs on the model "T" Ford.

Price, each .....\$0.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## FORD PISTON RINGS

"Leak-Proof" Piston Rings insure perfect compression in Ford cars; makes compression leakage a mechanical impossibility, which means maximum motor power and means that every particle of gas in your cylinder will aid in transmitting the motor's full horsepower capacity to the drive shaft. Equip your Ford car with these rings and eliminate all carbon troubles.

Ford size,  $3\frac{3}{4} \times \frac{1}{4}$ . Each.....\$1.75



## SUPEROYL PISTON RINGS



### A Special Ring for the Control of Excess Oil

Ford size,  $3\frac{3}{4} \times \frac{1}{4}$  inch, each ..... \$1.00

## MUNGER PISTON RINGS

A one-piece concentric ring correct in principle and one which will give more power, save gas and oil, and stop fouling spark plugs.

The wonderful compression holding power of these one-piece rings is due to their scientific design and their accuracy of manufacture. The expansion joint, the peening process which makes the ring fit the walls of the cylinder, the minute oil grooves which cause these rings to seat themselves almost immediately, are features which add to the efficient performance of Munger rings.

The expansion joint is so designed that when the ring is installed in the piston groove there will be perfect contact at every point throughout the joint, enough expansion to insure a perfect bearing surface at all points against the cylinder walls and enough overlap in the joint to prevent any possible leakage.

Ford size,  $3\frac{3}{4}$  in. x  $\frac{1}{4}$  in. Each.....\$1.25



## PLAIN PISTON RINGS



These rings are made from the very best close grained gray iron and each ring is cast individually instead of being cut from a pipe shaped casting. They are carefully machined and accurately ground to size and are superior in every way to the ring you are familiar with at the same price.

Each .....\$0.15

## PISTON RING COMPRESSOR



With this Compressor, Piston Rings can be set in just a fraction of the time ordinarily consumed. A slight hand pressure on handle produces a leverage strong enough to compress even the new and stiff rings with very little effort.

Each .....\$0.60

## THE BEAN RE-FACING AND RE-SEATING TOOL



The Bean Valve Re-facing Tool offers to the dealer and repair man the greatest labor-saving tool ever produced for the grinding and re-facing of valves.

The strong points of this tool are the new Spiral Cutters, affording greater ease of operation, accuracy of product, and durability.

The Bean Re-seating Tool consists of a cutter, a pilot and a cutter handle with lock-nut.

The spiral cutters are made of the very highest grade of cutting steel, carefully tempered and accurately ground. Its construction is such that its operation insures an absolutely perfect valve seat.

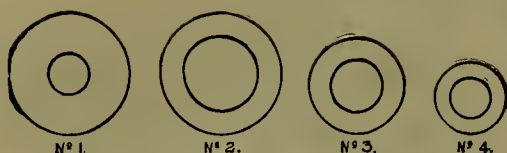
### COMPLETE OUTFITS

No. F-1—Consists of re-facing tool and re-seating tool.

Price .....\$3.25



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

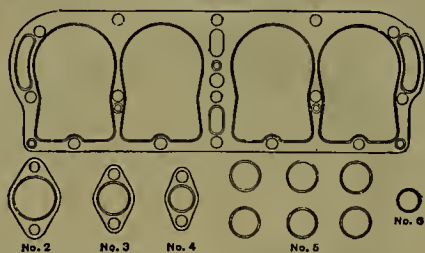
**FELT WASHERS FOR FORD CARS**

These are made of first quality felt, in the exact sizes as used on Ford cars.

	Outside dia.	Hole	Height	Per doz.
No. 1.	27/16 in.	7/8 in.	5/16 in.	\$0.56
No. 2.	2-1/2 in.	1 1/8 in.	3/8 in.	.36
No. 3.	2 in.	1 1/8 in.	3/8 in.	.40
No. 4.	1-1/2 in.	7/8 in.	7/32 in.	.40

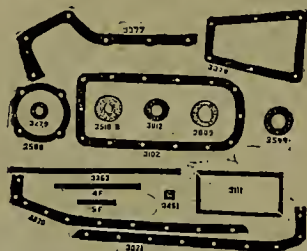
Price, per set.....\$0.25 Per doz. sets.....\$2.50

Note—A set consists of 2 each of Nos. 1 and 2, and 1 each of Nos. 3 and 4 washers.

**GASKET OUTFITS FOR FORD CARS**

- 1 Victor Cylinder Head Gasket.
- 2 Victor Cylinder Head Outlet Gasket.
- 3 Victor Cylinder Head Inlet Gasket.
- 4 Victor Cylinder Head Flange Gasket.
- 5 Victor Inlet and Exhaust Pipe Gasket.
- 6 Transmission Drain Plug Gasket.

Every Ford dealer should carry a stock of these gasket outfits, whether cylinder head of Ford motors are removed for grinding in valves, etc. To go to work and make one from asbestos sheet is quite a task. Made of copper, brass and pure asbestos. Price, per set complete.....\$0.80

**Washers and Gaskets for Ford Cars**

Contains an assortment covering all the washers used on a Ford car. Made of the best quality felt.

Set 23 pieces .....\$0.75

**CORK WASHER AND GASKET SET**

Complete set .....\$0.75

**GILMER WOVEN ENDLESS BELTS**

This woven fabric belt is waterproof and will not stretch.

1916 and earlier, each .....\$0.30  
1917, each ..... .35

**VELOX WOVEN ENDLESS BELT**

This Ford car fan belt is impervious to oil, heat and water. The linen and cotton fabric is woven together by special machinery, designed especially for this purpose. The belts are made endless and "stretch-proof."

1916 and earlier, each .....\$0.25

**LEATHER FAN BELTS**

Ford endless fan belts, double stitched, made of oak tanned or Spartan leather. The Spartan leather belts stretch less than others, are not affected by water, oil or atmospheric changes.

Each  
Spartan Endless, 1916 and earlier .....\$0.60  
Spartan Endless, 1917 ..... .75  
Oak Tan, 1916 and earlier ..... .35  
Oak Tan, 1917 ..... .40

**Running Boards**

No other accessories so improve the appearance and add to the stability and quiet running of the Ford as our "Uniq" Running Board. Prices include sets of bolts and nuts, finished to match boards.

Linoleum Top (gray), with aluminum molding, pair .....\$6.00

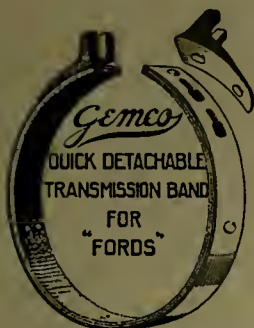
**Aluminum Heel-Plates**

Are made of extra heavy, tough aluminum, and will give long and satisfactory service.

Pyramid Pattern, size 6 in. x 10 1/4 in. Price, each ...\$0.50

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## The "Gemco" Quick Detachable Transmission Bands



These Bands are sold usually in sets of four, one as extra for quick roadside changes.

The old bands can be relined at very little expense so that by buying a set of four the driver always has one extra, newly-lined band for emergency.

### CHATTERLESS TRANSMISSION RAYBESTOS BRAKE LINING

The most troublesome part of the Ford Transmission Brake Bands, especially on low speed and reverse, has been the chatter when the bands are tightened, owing to the Brake Lining hardening and glazing. Raybestos Transmission Brake Lining for Ford cars eliminates the chatter and gives a long wearing life. The hot oil that the

lining runs in does not affect it and it is made only for Ford cars. No wire is used in its manufacture, thus eliminating the danger of short circuiting the magneto.

This lining is put up in boxes, each box containing one set or three pieces of Brake Lining 23 in. long, 1 1/4 in. wide and 5-32 in. thick, together with a sufficient quantity of brass rivets to attach a set of Transmission Brake Bands.

Raybestos lining, per box .....\$1.25  
Cotton lining, per box ..... 1.15



### TRANSMISSION BRAKE LINING

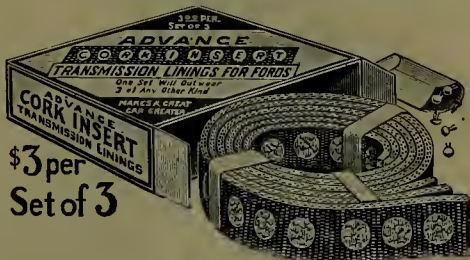
A good quality brake lining. Contains no wire in its construction. Has plenty of stability.

Price, per foot .....\$0.25

Up to the time of the marketing of these Bands it took three or six hours to apply new transmission bands to Ford cars. The "Gemco" Quick Detachable Bands are made of heavy spring steel, lined with the best material obtainable. There are two drop-forged ears, one of which is detachable (see illustration) and can be removed in less than one minute. Any one of the bands can be removed and replaced in about ten minutes through the inspection opening. All that is necessary to apply one of these bands is to remove the detachable ear, pass it around the transmission and attach the ear. Thus the initial cost of these bands and ten minutes, save the expense of disassembling the whole transmission case which means four to six hours at a cost of \$3.00 to \$4.00 every time it is necessary to reline one band which, on the average car, often is necessary three or four times a season.

"Gemco" Quick Detachable Band, lined, each .....\$1.50

### CORK INSERT TRANSMISSION LINING



\$3 per  
Set of 3

Stops chattering, gives a positive grip at all times. The harder the pressure the more positive the action. One set will outwear three sets of ordinary lining.

Price, per set of 3 .....\$3.00



### INTERNAL CAM BRAKES FOR FORD CARS

Are specially constructed Internal Cam Brakes, Raybestos lined which is particularly adapted to the requirements of the Ford car. This Raybestos lined Internal Cam Brake has been thoroughly tested out and found to be more effective and has a longer wearing life than the metal to metal brake furnished with the Ford car.

In attaching, it is simply necessary to remove the present Internal Cam Brakes and install the new set in their place, no extra parts being necessary.

Raybestos lined, per pair .....\$1.35  
Cotton lined, per pair ..... 1.15

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## GOODRICH BALL RETAINERS



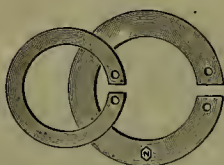
Reduce friction more than 33 1-3 per cent. by preventing contact between balls. Prevent balls from working out of race and riding on cone. Travel freely with the balls keeping them in line. Prevent broken balls, rattly axles and wheels and hard steering. Make front axle parts last as long as the rest of the car without replacements.

The Goodrich Ball Retainer separates the balls, so that each runs alone, unhampered, freely and smoothly in the raceway. This greatly strengthens the front wheels.

Can be quickly and easily installed, as they merely take the place of the cup and cone bearings.

Price, per set of four, including high grade balls.....\$2.50

### Ball Retainers



Made from special grade of steel to insure proper action.

Price, each, inner .....\$0.05

Price, each, outer ..... .05

### Ball Races



For front wheels. Accurately made from best grade steel. Carefully hardened and polished races.

Price, each, inner .....\$0.25

Price, each, outer ..... .15



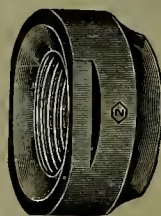
No. 660

### Mossberg Wheel Puller

Made of the finest material and guaranteed not to break. If wheel is stubborn a few taps of hammer on shaft bolt will soon release it without injury to wheel or puller.

Each .....\$1.25

### Adjusting Cone



For front wheel. Right and left threads. Made from steel and hardened.

Price, each .....\$0.20

Stationary Cone

Price, each .....\$0.30

### Steering Gear Bushing Sets



No. 2713 No. 2714

Consisting of four large bushings and two small as shown in cut. Ford Repair Catalog No. 2713-2714. They are both turned from the highest grade bearing bronze obtainable.

No. 2714. Small size. Price, each .....\$0.10

No. 2713. Large size. Price, each ..... .15

### Hub Cap Wrench



An explanation of this article is unnecessary, Ford owners being quite familiar with its uses and application.

Price, each .....\$0.25

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

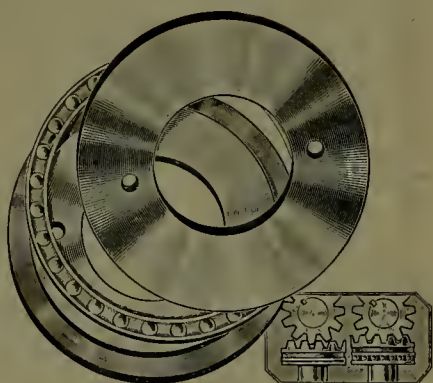


## SIMPLEX BALL THRUST BEARING

Common washers quickly wear thin and permit rear axle gears to pull away. They mesh poorly, become noisy and eventually must strip or break.

A Simplex ball thrust bearing cannot wear down. It holds the differential gear permanently and snugly against pinion, with three gear teeth always in contact. No friction; no heat; no noise.

Price each .....\$3.75



## Hudson Crank Case Repair Arm

Crank case repairs are difficult, expensive and time consuming. The engine must be taken out of the chassis, torn apart to make the repair and then have a new arm riveted on.

The Hudson Repair Arm overcomes this. An indispensable time saver.



Price, each .....\$1.50

## FIRESTONE WOOD WHEELS WITH FIRESTONE DEM. RIMS



For Ford Cars

Made of the very best thoroughly seasoned stock and by expert wheel makers. Equipped with the well known Firestone rim, which is mechanically perfect, simple in construction, safe in service, easy in operation and has continuous support under the rim.

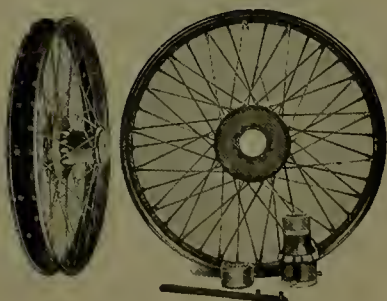
Simply loosen units and the rim comes off. Not necessary to remove the dust cap.

Set consists of four wheels equipped with demountable rims and one spare rim.

Complete set .....\$30.00

Set of rims only, consisting of four demountable rims complete and one spare rim ..... 20.50

## HOUSE WIRE WHEELS FOR FORD CARS



Wire wheels greatly reduce vibration and thereby increase mileage on both gasoline and tires. Add greatly to the appearance of a Ford car, and can be changed very quickly.

Set includes five wheels complete, four inner hubs, four hub caps, dust cover for spare wheel, one hub cap wrench, one spoke wrench.

Made in three colors—red, white, or black, for any model.

Set complete .....\$65.00

## SPARE WHEEL CARRIERS



No. 1.



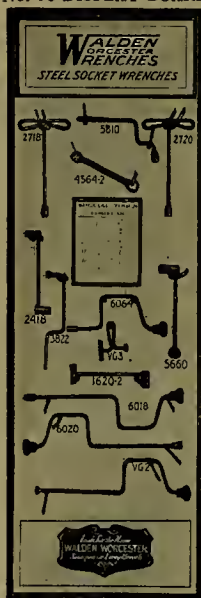
No. 3

No. 1 carrier complete and bracket for license tag and lamp for touring car or sedan. Each .....\$10.00

No. 3 carrier, complete for roadster. Each ..... \$9.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## No. 78 DISPLAY BOARD



On this Board are shown tools that will fit any nut or bolt on a Ford car from any angle or position. The only wrenches that will do this.

Ford owners and repairers are buying quick working, special tools and most of them are using Walden-Worcester-Guaranteed-Wrenches—tools that are made right and to last—for good work done quickly, for service and satisfaction.

The display board and wrenches will attract attention, make sales and show that you are specializing in practical tools for any service.

## No. 78 DISPLAY AND STOCK SET

6 2720	.55	\$3.30
6 2718	.55	3.30
6 5810	.50	3.00
6 4564-2	1.20	7.20
6 5660	1.10	6.60
6 V.G.-3	.50	3.00
6 1620-2	.75	4.50
6 2418	.65	3.90
6 6064	.60	3.60
6 3822	.50	3.00
6 6018	.80	4.80
6 6020	.80	4.80
6 V.G.-2	.75	4.50

78 Wrenches on handsome display board, covered with sheet metal and enameled black with center panel containing directory and full information regarding all wrenches. Each wrench is numbered as illustrated.

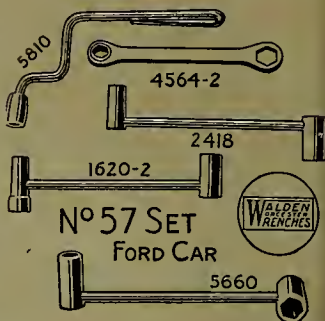
Complete .....\$5.80



**6064**

Special Designed Speed Wrench.  $\frac{1}{2}$  in. socket,  $12\frac{1}{2}$  in. overall. Particularly differential drive gear, front and rear fenders, and muffler rods. Generally used on any 5-16 in. A. L. A. M. cap screws. Each .....\$0.65

## No. 57 FORD WRENCH SET



**No 57 SET**  
**FORD CAR**

**5810** Connecting Rod Wrench. Fits all connecting rods including the fourth connection. This is the original design, the first wrench made to reach the fourth connection without removing the engine from the car. Be sure you get the wrench with all right angle bends and loop handle. 5810 stamped on handle.  
Each .....\$0.50

**4564-2** Ratchet Wrench,  $11/16$  in. hex opening, particularly designed for use on transmission bands (brake and reverse) Ford car. Opposite end  $15/16$  in. for use on Champion X spark plugs and slow speed connecting lock. A combination tool which should be found most serviceable.  
EACH \$1.20

**2418** Double Socket Offset Wrench. Socket sizes  $9/16$  in. and  $3/4$  in., handle 11 in. Used on brake shoe support, connecting rod clamp, crank shaft (main) bearing, fan bracket spindle, steering gear post, steering post bracket, spindle connecting rod, and front radius rod. No. 1620 fits main bearing bolt heads.  
EACH \$0.65

**5660** Triple Socket Offset Wrench. Socket sizes  $15/16$  in.,  $7/8$  in. and  $11/16$  in. Designed for heavy duty. Used on drive shaft pinion, front spring clip, hub bolt and nut, radius rod, rear hub lock, rear spring clip spindle arm and body bolts.  
EACH \$1.10

No. 57 Set, 5 wrenches, complete.....\$4.20

**1620-2** Triple Socket Wrench. Socket sizes  $5/8$  in. and  $1/2$  in. hex and  $9/16$  in. square. This is our new improved "TOMAHAWK" wrench. The double end socket has been designed particularly for clearance around cylinder head bolts and other places. Used on cylinder head, brake and reverse support, cylinder inlet and outlet connections, differential case, drive shaft roller bearing, front spring tie, spring, run board fender, rear axle housing, crank case (lower cover), controller shaft bracket, and  $9/16$  sq. socket on main bearing bolt head. EACH \$0.75

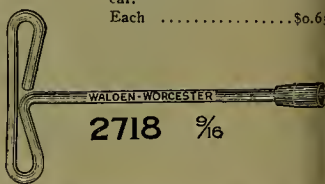


**2718 TEE HANDLE 2720**

2718 is  $9/16$  in. socket, 6 in. handle, 12 in. shank. Used on ball and socket joint, clutch release fork clamp, commutator case support, crank case arm, engine bolts, cylinder cover, cylinder valve cover, fan adjustment, front radius rod ball, inlet and exhaust clamp, muffler bracket, radiator, transmission cover and universal ball.

2720 is  $3/4$  in. socket, 6 in. handle, 12 in. shank. Used on brake shoe support, cylinder inlet and outlet connections, cylinder head, drive shaft roller bearings, front and rear spring tie, run board fender and controller shaft bracket nuts.

2718-2720, each .....\$0.55



**2718**  $9/16$

**6018 SPEED WRENCHES 6020**

Long shank braces. Shank 11 in., sweep 9 in. Used in combination with other socket wrenches for spinning nuts on and off. Big time savers and considered indispensable.

when once tried. 6018 is  $9/16$  in. socket and is used on same parts as 2718. 6020 is  $3/4$  in. socket and is used on same parts as 2720.

6018-6020, each .....\$0.80



**% B.S.18(6018)**

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## Mossberg Socket Wrench Set



No. 30

Packed in fibre board case containing:

One No. 355 ratchet socket wrench.

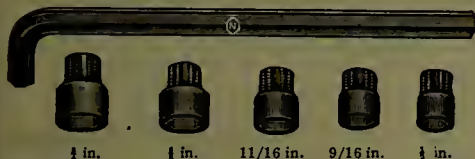
One No. 351 extension tube,  $9\frac{1}{4}$  in. long.

One No. 336 universal joint.

One No. 302 screw driver bit and ten pressed steel sockets 17-32 in. to 31-32 in., including one oval socket to fit main bearing bolts of Ford models up to 1915. One spark plug socket 31-32 in. and square socket 19-32 in., to fit main bearing bolts on 1915 cars.

Set, each .....\$5.00

## Socket Wrench Set and Handle No. 11



$\frac{1}{4}$  in.  $\frac{1}{2}$  in. 11/16 in. 9/16 in.  $\frac{1}{2}$  in.

Of unique construction and especially adapted for Ford cars. The handle is of hexagon stock which fits into a similar hexagon opening in the head of the wrench socket, so that in close quarters a fresh grip can be taken not only easily but very quickly. This feature gives it practically the range of an expensive ratchet wrench.

After a bolt has been started the handle may be reversed and the straight end used to remove or spin it out very rapidly.

Made from steel of high quality, carefully hardened.

This set can be used on all hexagon head bolts and nuts for Ford cars.

The sizes of the different sockets embraced in this set are  $\frac{1}{2}$ "  $\frac{1}{4}$ ",  $\frac{3}{8}$ ", 11-16" and  $\frac{1}{2}$ ".

Made from steel sockets carefully hardened, each set packed in box.

No. 11. Price, per set .....\$1.65

## Cock Wrench



For use in opening pet cock to ascertain oil level without it being necessary to reach or crawl under car.

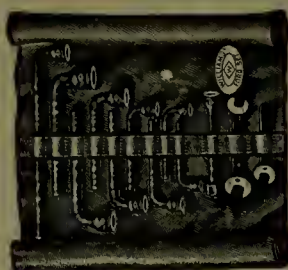
Very convenient also to drain radiator, the cock of which being in a quite inaccessible position.

By carrying it in front seat it may likewise be used as gasoline gauge, avoiding the consequent presence of dirt and sediment in gas tank when a stick or other article handy at the moment is used to measure the contents.

24 inches long. Enamelled black.

Price, each .....\$0.35

## Williams' Wrench Set



With Williams' "Ford" Wrench Set and an adjustable wrench you will be prepared for any mechanical emergency which may develop from the use of the popular "Ford" machines. The Williams' Superior Drop Forged Wrench Set is without an equal for this service. Complete with canvas roll.

Price, per set, semi-finished .....\$5.60

## Ford Socket Wrenches



### STRAIGHT OFFSET STYLE

Made of seamless steel tubing, hardened. Ebony finish. Five wrenches contained in heavy canvas case.

These socket wrenches fit the following parts of the Ford car:

No. 11. Manifold studs, coil box, dash bracket, crank case and cover, valve cover, front belt tightener nut, tie rod adjusting clamp, carburetor manifold nut, dash bolts, differential case.

No. 12. Spring shackles, magneto coils and magnet, steering joints, hub bolts, time gear cover, crank case and hand hole covers, universal joint case, engine bolts to frame, dash brackets, starting crank brackets, body bolts, cam shaft stub nuts, fender clamps, hoard bracket braces, windshield hinge, connecting rod wrist pin end, bolts that hold transmission together.

No. 13. Engine head bolts, spring clips, pivot pins, brake anchor pins, water pipe connections, headlight brackets, main bearings, windshield clamps, connecting rods-crank end.

No. 14. Front radius rod, steering arm, lamp brackets, tie rod pins, main bearings, rear radius rod, rear spring clips, standard spark plug, fan brackets, pivot bolts.

No. 15. Champion spark plug, rear axle wheel nut, low speed adjusting screw, jam nut.

No. 65. Price, straight style, per set .....\$2.50

No. 75. Price, offset style, per set .....3.50

## Oil Cock Wrench



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## MOSSBERG FORD WRENCHES



DOUBLE END SPARK PLUG AND CYLINDER HEAD

SCREW WRENCH NO. 635

Flat opening 31-32 in. Fits spark plugs on Ford cars. The heavy duty socket 41-64 in. accurately fits the cylinder head cap screws and all 7-16 inch bolts.

No. 635 .....\$0.80



REVERSIBLE RATCHET CYLINDER HEAD AND REAR AXLE HOUSING SOCKET WRENCH NO. 631

For quick tight work on cylinder head screws and rear axle housing nuts or any 7-16 or 5-16 inch screws. 9/16 in. long with 13-16 inch handle. Well made and will stand up on heavy work.

No. 631. Each .....\$2.80



REVERSE AND BRAKE PEDAL TENSION SPRING RATCHET WRENCH NO. 645

Strong, durable and quick. The cleverest tool on the market for tightening tension springs on brakes and pedals.

No. 645. Each .....\$0.55

FLY WHEEL CAP SCREW WRENCH NO. 637

A handy wrench for one of the most awkward jobs around a Ford car. Made specially for flywheel cap screws.

No. 637 .....\$0.75



CYLINDER HEAD AND REAR HOUSING NUT WRENCH NO. 630

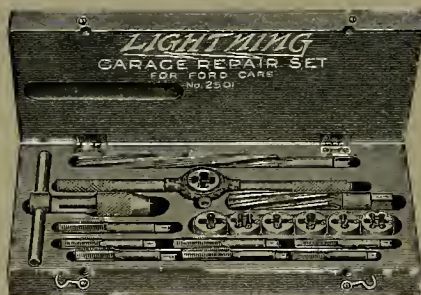
Triple End Socket Wrench. Double end has 5-16 inch and 7-16 inch sockets possessing high leverage and single end has 7-16 inch socket for spinning off nuts.

No. 630. Each .....\$0.55



## Lightning Garage Repair Set

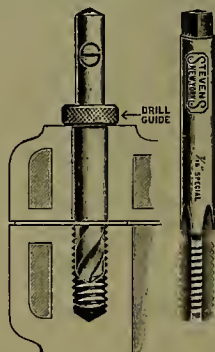
## No. 100 Cylinder Tap and Drill Set



No. 2501 Taps, Dies and Reamers

Designed especially for repairs on Ford Cars, Model T. A necessity for every garage and repair shop. Contains seven sizes taps and dies, cutting: 1/4 (28), 5-16 (24), 3/8 (24), 13-32 (16), 7-16 (20), 7-16 (14), 1/2 (20). Spiral Fluted Reamers: 2-in-1 for spindle body and spindle arm bushing; 1 for piston pin bushing. Stock and T tap wrench—all contained in neat hardwood case.

Set, each .....\$14.50



For removing broken cylinder head and water connection bolts in Ford Cylinders without taking off the Cylinder Head.

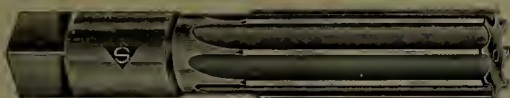
Ford cylinder head bolts often shear off in an attempt to draw them up too tight and every repair man is familiar with the difficulty of removing the threaded portion that remains in the casting.

Set, each .....\$1.60

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.



## FORD REAMERS AND REPAIR TOOLS



Made of the highest grade crucible steel. Made with the utmost care as to quality and accuracy. These reamers are a necessity to a well equipped shop. The following sizes are furnished:

	Each		Each
No. 2525B—Differential Pinion .....	\$2.20	No. 3058—Valve Stem Push Rod .....	\$1.90
2527—Differential Spider .....	3.75	3058X—Valve Stem Push Rod, oversize .....	2.20
2540—Drive Shaft Housing .....	3.25	3314½—Transmission Triple Gear .....	2.10
2559—Hub Cam Shaft .....	2.00	3320BC—Transmission Driven Gear Sleeve....	3.40
2713—Steering Body .....	2.10	3327B—Driving Plate .....	3.00
2714—Steering Arm .....	2.20	3521—Steering Gear .....	1.90
3022½—Piston Pin .....	2.30	3545—Steering Post Bracket .....	2.30
3024—Connecting Rod (Large End) .....	4.00	3820 } Front and Rear Spring Perch.....	2.20
3042—Cam Shaft .....	2.30	3844 }	
3052X—Valve Stem, oversize .....	1.60	3960—Fan Assembly .....	1.90

### STEVENS REAMER SET No. 201

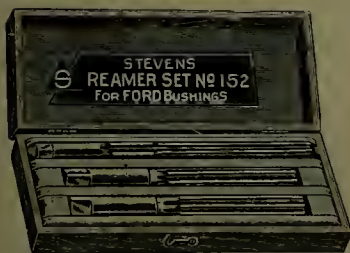


A most complete set of Ford Reamers. Consists of the 3-in-1 aligning reamers for crankshaft bearings and eleven of the most needed sizes. They cover all ordinary requirements for repairs and bushing replacements on motor, transmission and axles.

Following sizes included in 3-in-1 crankshaft aligning: 2525B, 2527, 2540, 2559, 2713, 2714, 3022½, 3042, 3058, 3314½, 3327B.

Price, per set .....\$37.50

### POPULAR REAMER SET No. 152



This set meets the demand of the Ford owner or small dealer who limits himself to a few general Ford repairs. It is comprised of one straight flute duplex reamer for steering gear bushings No. 2713-2714, also a reamer for piston No. 3022½ and transmission triple gear bushing No. 3314½.

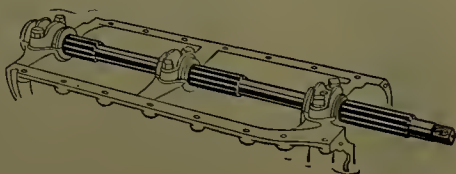
Price, each .....\$7.75

Set No. 154 same as above but spiral flute reamer is furnished instead of straight flute.

Price, each .....\$7.25

### THREE IN ONE ALIGNING REAMER

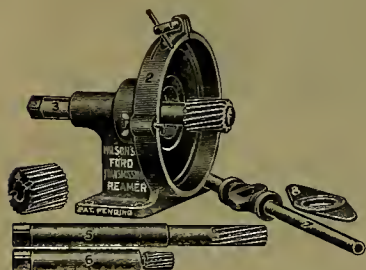
Perfect alignment is the secret of bearing adjustment. A 3 in 1 reamer will bring all bearings to proper size and in perfect alignment. All three bearings being reamed at one time, insures absolute accuracy and true alignment. An allowance of .0025 is made for wear of crankshaft. A set of bearings fitted in this way will retain their adjustment as though the motor were new. May also be used for reaming and fitting connecting rod bearings.



Price, each .....\$18.00

ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## TRANSMISSION REAMING MACHINE

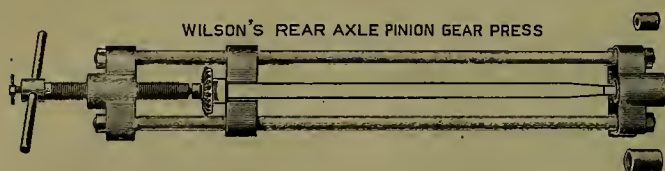


One of the greatest time savers on the market. This outfit will enable you to completely remanufacture a transmission in twenty-five minutes from the time you take out the first bolt. This machine insures all three transmission drums revolving with triple gears without wobbling or binding.

Excessive wear is thereby eliminated. A worn transmission properly repaired will give satisfactory service for a long time.

Price, complete .....\$68.00

## REAR AXLE PINION GEAR PRESS



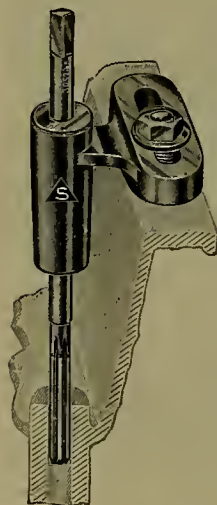
WILSON'S REAR AXLE PINION GEAR PRESS

This press built for just one purpose, taking off and putting on axle shaft drive gears. No matter how tight it will get them and does it so quickly and neatly you cannot afford to be without it.

This special tool is always ready and does a workman-like job every time without damaging part. Can be used on Chevrolet 490, as well as Fords.

Price, each .....\$20.00

## VALVE STEM REAMER JIG



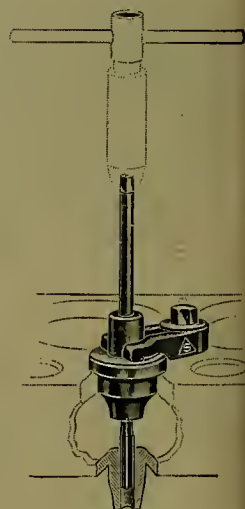
Oversize Push Rod Reamer and Jig. Push rod guides, when they become worn excessively to one side through continual cam action, must of course be restored to their original alignment before oversize push rods are installed. The oversize reamer is made from high grade crucible steel, ground with extreme care to effect a good working fit for the oversize rod. The jig bolting, as illustrated, squarely to the cylinder base, holds the reamer firmly to line.

Price, each .....\$3.50

Valve Stem Reamer Jig for use with valve stem reamer in reaming out valve stem guides when they become worn. This is a very particular job, inasmuch as these are part of the cylinder block and the slightest deviation may ruin the entire casting. The valve stem reamer jig consists of a bushing held by a clamp and bolt which are securely fastened to the cylinder head.

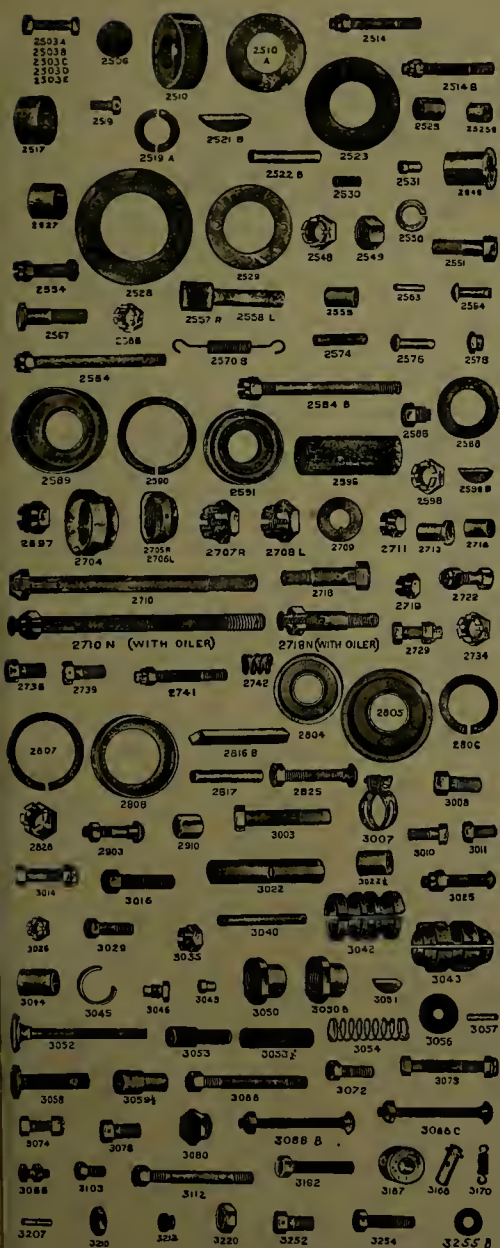
Price, without reamer .....\$1.25

## OVERSIZE PUSH ROD REAMER AND JIG



ABOVE PRICES ARE SUBJECT TO CHANGE AT ANY TIME.

## REPAIR PARTS FOR FORD CARS

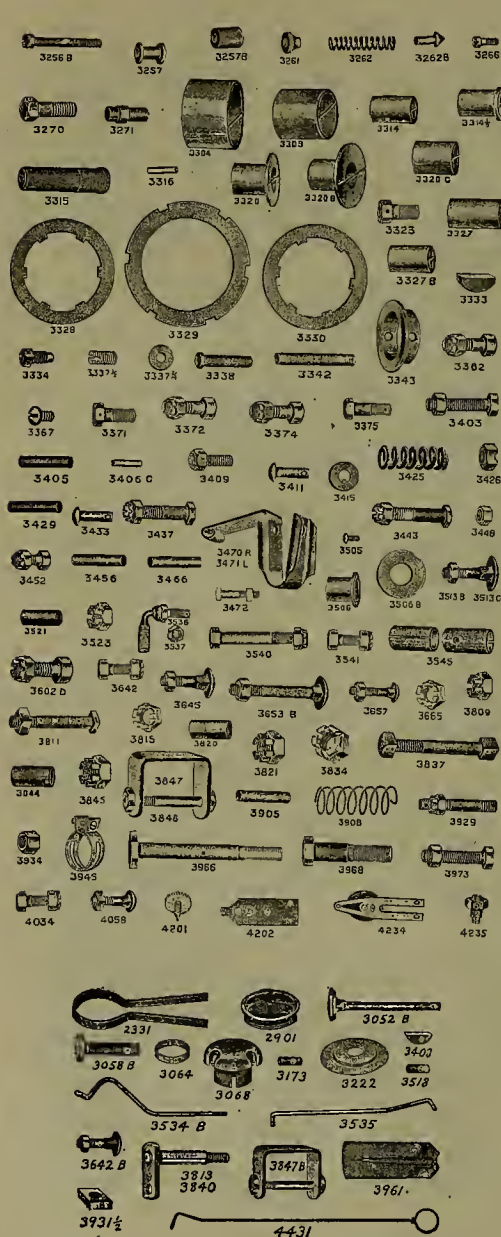


No.	Description	Price per C
2531	Piston Ring Squeezer (3Z-652) ....	\$25.00
2503A	Axle Housing Bolt and Nut, 9-16" ..	6.25
2503B	Axle Housing Bolt and Nut, 25-32" ..	6.25
2503C	Axle Housing Bolt and Nut, 1 1-16" ..	6.88
2503D	Axle Housing Bolt and Nut, 1 7/8" ..	7.50
2503E	Axle Housing Bolt and Nut, 1 5-16" ..	6.88
2506	Axle Shaft Washer .....	1.25
2510	Axle Housing Cap .....	4.38
2510A	Axle Outer Roller Bearing Steel Washer .....	1.25
2514	Diff. Case, Stud and Nut .....	6.88
2514B	Diff. Case, Stud and Nut .....	6.88
2517	Diff. Case Bushing .....	41.25
2519	Diff. Drive Gear Screw .....	4.38
2519A	Diff. Gear Lock Ring .....	1.88
2521B	Diff. Gear Key .....	6.25
2522B	Diff. Gear Pin .....	1.88
2523	Diff. Gear Thrust Washer, fibre....	7.50
2525B	Diff. Pinion Bushing, 1911-17.....	8.75
2527	Diff. Spider Bushing .....	30.00
2528	Bearing Metal Diff. Thrust Plate....	37.50
2528	Bronze Diff. Thrust Plate .....	62.50
2529	Diff. Thrust Plate, steel .....	10.00
2530	Diff. Thrust Plate Pin, 13-32" L....	1.25
2531	Diff. Thrust Plate Pin, 7-32" L....	1.25
2540	Drive Shaft Housing Front Bushing Babbitt .....	37.50
2548	Radius Rod Nut .....	6.25
2549	Radius Rod Lock Nut .....	5.00
2550	Radius Rod Lock Washer .....	1.25
2551	Radius Rod Bolt .....	12.50
2554	Ball Joint Support Bolt and Nut....	8.13
2557	Hub Cam Shaft, Right .....	23.75
2558	Hub Cam Shaft, Left .....	23.75
2559	Hub Cam Shaft Bushing .....	12.50
2563	Cam Shaft Lever Pin .....	1.88
2564	Lever Clevis Pin .....	2.50
2567	Brake Shoe Support Bolt .....	12.50
2568	Brake Shoe Support Bolt Nut ....	5.00
2570B	Brake Shoe Coil Spring .....	3.75
2574	Joint Knuckle Pin .....	1.63
2576	Joint Ring Rivets .....	1.50
2578	Joint Housing Plug .....	5.00
2584	D.S. Roller Bearing Stud and Nut. ....	8.75
2584B	D.S. Roller Bearing Stud and Nut. ....	11.25
2586	D.S. Roller Bearing Ho's'g Set Sc. ....	7.50
2588	D.S. Roller Bearing Distance Plt....	2.50
2589	D.S. Ball Race .....	25.00
2590	D.S. Ball Retainer .....	2.38
2591	D.S. Thrust Collar .....	30.00
2596	D.S. Sleeve .....	100.00
2598	D.S. Castle Nut .....	7.50
2598B	D.S. Pinion Key .....	4.63
2697	Spindle Arm Nut .....	6.25
2704	Stationary Cone .....	21.25
2705	Adj. Cone, Right Thread .....	13.75

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## REPAIR PARTS FOR FORD CARS



No.	Description	Price per C
2706	Adj. Cone, Left Thread .....	\$13.75
2707	Spindle Nut, Right .....	14.38
2708	Spindle Nut, Left .....	14.38
2709	Spindle Washer .....	1.25
2710	Spindle Bolt .....	30.00
2710N	Spindle with Oiler .....	40.00
2711	Spindle Nut .....	5.00
2713	Spindle Body Bushing .....	13.75
2714	Spindle Arm Bushing (Bronze) ....	6.25
2714	Spindle Arm Bushing (Steel) ....	2.50
2718	Spindle Conn. Rod Bolt .....	17.50
2718	Hardened Spindle Conn. Rod Bolt..	20.00
2718N	Spindle Conn. Rod Bolt with Oiler..	22.50
2718N	Hardened Spindle Conn. Rod Bolt with Oiler .....	25.00
2719	Spindle Conn. Rod with Nut .....	4.00
2722	Steering Yoke Clamp, Bolt and Nut ..	8.13
2729	Ball Socket Bolt and Nut .....	8.13
2734	Front Radius Rod Nut .....	6.25
2738	Front Radius Rod Ball Cap Screw for '09 and '10 .....	7.50
2739	Front Radius Rod Ball Cap Screw for '11, '12, '13, '14 .....	7.50
2741	Radius Rod Ball Cap Stud and Nut for '15, '16, '17 .....	7.50
2742	Radius Rod Ball Cap Spring .....	2.25
2804	Outer Race .....	13.75
2805	Inner Race .....	20.00
2806	Outer Ball Retainer .....	1.50
2807	Inner Ball Retainer .....	1.75
2808	Dust Ring .....	3.75
2816B	Rear Hub Key for Taper Axle.....	3.75
2817	Rear Hub Pin .....	3.13
2825	Hub Bolt and Nut .....	4.13
2828	Rear Hub Lock Nut .....	8.75
2901	Gasoline Tank Plug .....	18.75
2903	Tank Bolt and Nut .....	6.25
2910	Feed Pipe Pack Nut .....	6.25
3003	Cyl. Head Cap Screw .....	7.50
3007	Cyl. Head Outlet Hose Clip, 3/8 ..	6.25
3008	Cyl. Head Outlet Conn. Screw ....	6.25
3010	Cyl. Cover Bolt .....	6.25
3011	Cyl. Cover Cap Screw .....	4.50
3014	Cyl. Cover Crank Case Bolt and Nut ..	8.13
3016	Cyl. Inlet Conn. Screw .....	5.63
3022	Piston Pin .....	31.25
3022 1/2	Piston Pin Bushing .....	18.75
3025	Conn. Rod Cap Bolt and Nut .....	12.50
3026	Conn. Rod Cap Bolt Nut .....	5.00
3029	Conn. Rod Clamp Screw .....	6.25
3035	Crank, Shaft Bearing Bolt Nut ....	5.00
3040	Crank Shaft Starting Pin .....	4.38
3042	Cam Shaft Front Bearing .....	35.00

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## REPAIR PARTS FOR FORD CARS

No.	Description	Price per C	No.	Description	Price per C
3043	Cam Shaft Center Bearing .....	\$30.00	3314	Trans. Triple Gear Bushing .....	\$37.50
3044	Cam Shaft Rear Bearing .....	31.25	3314½	Trans. Triple Gear Flgd. Bushing .....	43.75
3045	Cam Shaft Bearing Ring .....	2.50	3315	Trans. Triple Gear Shaft .....	35.00
3046	Cam Shaft Bearing Set Screw .....	4.50	3316	Trans. Triple Gear Riveting Pin .....	1.25
3049	Cam Shaft Gear Dowel Pin .....	2.00	3320	Transmission Driven Gear Sleeve Bushing .....	62.50
3050L	Cam Shaft, Large Gear Lock Nut, '12-'17 .....	18.75	3320B	Transmission Driven Gear Sleeve Bushing .....	68.75
3051	Cam Shaft, Small Gear Key .....	3.75	3320C	Transmission Driven Gear Sleeve Bushing .....	31.25
3052	Valve .....	20.00	3323	Transmission Driving Plate Screw .....	6.25
3052B	Valve (1-64" oversize stem) .....	21.25	3327B	Transmission Driving Plate Screw .....	31.25
3053	Valve Bushing, '09-'10 .....	18.75	3328	Transmission Thrust Plate, small .....	17.50
3053½	Valve Bushing, '11-'12 .....	18.75	3329	Transmission Thrust Plate, large .....	17.50
3054	Valve Spring .....	3.13	3330	Transmission Distance Plate .....	37.50
3056	Valve Spring Seat .....	1.25	3333	Transmission Clutch Disc Drum Key .....	6.25
3057	Valve Spring Seat Pin .....	1.25	3334	Transmission Clutch Disc Drum Set Screw .....	6.25
3058	Push Rod .....	21.25	3337½	Transmission Clutch Finger Screw .....	6.25
3058B	Push Rod (1-64" oversize stem) .....	21.25	3337¾	Transmission Clutch Finger Washer .....	1.25
3059½	Push Rod Bushing .....	25.00	3338	Transmission Clutch Finger Pin .....	2.50
3064	Inlet and Exhaust Pipe Gland .....	1.88	3342	Transmission Clutch Spring Thrust Ring Pin .....	3.75
3066	Inlet and Exhaust Clamp Stud and Nut .....	6.25	3343	Transmission Clutch Spring Thrust Ring .....	12.50
3068	Breather Pipe .....	13.75	3362	Transmission Cover Bolt and Nut .....	8.13
3072	Crank Case and Cyl. Cover Cap Screw .....	5.00	3367	Transmission Cover Door Screw .....	1.25
3073	Crank Case Arm Bolt and Nut (Side) .....	10.63	3371	Universal Ball Cap Bolt .....	6.25
3074	Crank Case Arm Bolt and Nut (Top) .....	8.13	3372	Universal Ball Cap Bolt and Nut .....	8.13
3078	Crank Case Front Bearing Screw .....	7.50	3374	Transmission Cover Bolt and Nut .....	8.13
3080	Crank Case Drain Cup Plug .....	7.50	3375	Transmission Cover Screw .....	6.25
3088	Engine Pan Bolt and Nut .....	5.00	3403	Clutch Lever Screw and Nut .....	7.50
3088B	Engine Pan and Hood Board Bolt and Nut, ¾ .....	3.75	3405	Clutch Lever Pin .....	1.25
3088C	Engine Pan and Hood Board Bolt and Nut, ¾ .....	3.75	3406C	Clutch Release Fork Pin .....	1.25
3103	Crank Case Lower Cover Screw .....	3.75	3408	Clutch Release Fork Key .....	3.75
3112	Cyl. Valve Cover Stud and Nut .....	6.88	3409	Clutch Release Fork Clamp Screw .....	7.50
3162	Commutator Case Sup. Bolt .....	7.50	3411	Clutch Lever Clevis Pin .....	2.50
3107	Commutator Roller .....	12.50	3415	Transmission Band Washer .....	1.63
3168	Commutator Roller Pin .....	2.50	3425	Transmission Band Spring .....	3.75
3170	Commutator Roller Arm Spring .....	2.50	3426	Transmission Band Adjusting Nut .....	6.25
3173	Commutator Arm Pin .....	2.50	3429	Slow Speed Notch Pin .....	1.25
3207	Commutator Brush Cap Pin .....	1.25	3433	Speed Lever Clevis Pin .....	2.50
3210	Commutator Contact Point Nut .....	2.50	3437	Brake and Reverse Support Bolt and Nut .....	8.75
3212	Commutator Thumb Nut .....	3.75	3443	Clutch Pedal Support Bolt and Nut .....	9.38
3220	Commutator Lock Nut .....	6.25	3446	Slow Speed Conn. Lock Nut .....	2.50
3222	Commutator Shield .....	2.50	3452	Controller Shaft Bracket Bolt and Nut .....	6.88
3252	Magneto Spool Sup. Screw .....	6.25	3456	Hand Brake Lever Pin .....	1.25
3254	Magnet Bolt .....	7.50	3466	Hub Brake Lever Pin .....	1.25
3255B	Magnet Bolt Washer .....	1.50	3470	Hub Brake Rod Support, Right .....	13.75
3256B	Magnet Washer Screw .....	10.00	3471	Hub Brake Rod Support, Left .....	13.75
3257	Magnet Brass Sup., '11-'17 .....	12.50	3472	Hub Brake Rod Support, Bolt and Nut .....	3.75
3257B	Magnet Brass Sup., '09 and '10 .....	12.50	3505	Steering Gear Cover Screw .....	2.50
3261	Magneto Contact Thumb Nut .....	6.25	3506	Steering Gear Cover Steel Bushing .....	12.50
3262	Magneto Contact Spring .....	6.25	3506B	Steering Gear Driving Pinion Washer .....	3.75
3262B	Magneto Primary Contact Pt. .....	3.75	3513B	Steering Gear Tubing Flange Screw & Nut .....	6.25
3266	Magneto Contact Fibre Screw .....	1.25	3513C	Steering Gear Tubing Flange Screw & Nut .....	6.25
3270	Fly Wheel Cap Screw .....	10.00	3518	Steering Gear Pinion Pin .....	3.75
3271	Fly Wheel Dowel Pin .....	6.25			
3304	Trans. Reverse Gear Bushing .....	100.00			
3309	Trans. Slow Speed Gear Bushing .....	62.50			

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## REPAIR PARTS FOR FORD CARS

No.	Description	Price per C	No.	Description	Price per C
3521	Steering Gear Pinion Shaft Bushing .....	\$25.00	4452	Spray Needle Assembly Holley Carb. 1913.	\$75.00
3523	Steering Gear Post Castle Nut .....	5.00	4559	Spray Needle Assembly Holley Carb. 1912.	75.00
3534B	Commutator Pull Rod .....	8.75	4616	Spring for Heinze Coil .....	37.50
3535	Carburetor Pull Rod .....	8.75	4618	Bar for Heinze Coil .....	31.25
3536	Ball and Socket Joint .....	9.38	4639	Switch Plug for Heinze Coil (Old style) ..	5.63
3537	Ball and Socket Joint Nut .....	1.88	4663	Bridge for Kingston Coil .....	37.50
3540	Steering Post Bracket Bolt and Nut, 2 1/4" ..	12.50	4666	Spring for Kingston Coil .....	37.50
3541	Steering Post Bracket Bolt and Nut, 25-32" ..	10.00	4682	Lower Spring for K-W Coil .....	
3545	Steering Post Bracket Bushing (2 piece) Brass .....	41.25	4683	Upper Spring for K-W Coil .....	
3602D	Body Bracket Conn. Bolt and Nut .....	12.50		100 Lot Pairs .....	50.00
3642	Dash Bracket Bolt and Nut .....	7.50		500 Lot Pairs .....	47.50
3642B	Dash Bracket to Dash Bolt and Nut .....	6.25		1,000 Lot Pairs .....	45.00
3645	Dash Bracket Top Bolt and Nut .....	6.25	4682A	Upper Spring for K-W Units, used in Heinze Coil .....	30.00
3653B	Dash to Body Bracket Bolt and Nut .....	6.25	4683A	Upper Spring for K-W Units, used in Heinze Coil .....	35.00
3657	Oil Lamp Bracket Screw and Nut .....	6.25	4716	Spring for Kingston Coil .....	37.50
3665	Gas Lamp Bracket Nut .....	5.00	4717	Bridge for Kingston Coil .....	37.50
3809	Front Spring Clip Nut .....	5.00	4718	Switch Key for Kingston Coil .....	6.25
3811	Front Spring Tie Bolt and Nut .....	4.25	4731	Switch Plug for Metal Box Coil .....	7.50
3813	Front Spring Hanger .....	31.25	4733	Lower Spring for Metal Box Coil .....	
3815	Front and Rear Spring Hanger Nut .....	4.38	4734	Upper Spring for Metal Box Coil .....	
3820	(Steel) Front Spring Perch Bushing .....	3.75		100 Lot Pairs .....	50.00
3820	(Bronze) Front Spring Perch Bushing .....	10.00		500 Lot Pairs .....	47.50
3821	Front Spring Perch Nut .....	8.75		1,000 Lot Pairs .....	45.00
3834	Rear Spring Clip Nut .....	6.25	4736	Spring for Heinze Coil .....	37.50
3837	Rear Spring Tie Bolt and Nut .....	7.50	4737	Bridge for Heinze Coil .....	31.25
3840	Rear Spring Hanger .....	31.25	4739	Spring for Metal Box Coil .....	50.00
3844	(Steel) Rear Spring Perch Bushing .....	6.25	4740	Bridge for Metal Box Coil .....	37.50
3844	(Bronze) Rear Spring Perch Bushing .....	21.25	6115	Spray Needle Assembly Kingston Carb. 1910-17 .....	50.00
3845	Rear Spring Perch Nut .....	9.38	2331	Piston Ring Squeezer (3Z-652) .....	25.00
3847	Front Spring Retainer Clip with Bolt and Nut .....	7.50	2901	Gasoline Tank Cap .....	18.75
3847	Front Spring Retainer Clip with Bolt and Nut (for 6-leaf Springs) .....	7.50	3052B	Valve (1-64" oversize stem) .....	21.25
3848	Rear Spring Retainer Clip with Bolt and Nut .....	7.50	3058B	Push Rod (1-64" oversize stem) .....	21.25
3905	Starting Crank Ratchet Pin .....	2.50	3064	Inlet and Exhaust Pipe Gland .....	1.88
3908	Starting Crank Spring .....	3.75	3068	Breather Pipe .....	13.75
3929	Radiator Stud and Nut .....	8.75	3173	Commutator Arm Pin .....	2.50
3931 1/2	Radiator Stud Washer Nut .....	2.50	3222	Commutator Shield .....	2.50
3934	Radiator Rod Nut .....	3.13	3408	Clutch Release Fork Key .....	3.75
3945	Outlet Connection Hose Clip, 2 1/2" .....	6.25	3518	Steering Gear Pinion Pin .....	3.75
3961	Fan Blade .....	6.25	3534B	Commutator Drill Rod .....	8.75
3966	Fan Shaft .....	25.00	3535	Carburetor Drill Rod .....	8.75
3968	Fan Bracket Bolt .....	15.00	3642B	Dash Bracket to Dash Bolt and Nut .....	6.25
3973	Fan Adj. Screw and Nut .....	10.00	3813	Front Spring Hanger .....	31.25
4034	Muffler Bracket Bolt and Nut .....	8.13	3840	Rear Spring Hanger .....	31.25
4058	Hood Board Bolt and Nut .....	6.25	3847B	Front Spring Retainer Clip with Bolt and Nut (6 Leaf Springs) .....	7.50
4201	Screw for Kingston Coil .....	37.50	3931 1/2	Radiator Stud Washer Nut .....	2.50
4202	Spring for Kingston Coil .....	37.50	3961	Fan Blade .....	6.25
4234	Spring for Kingston Coil .....	37.50	4431	Carburetor Priming Rod .....	6.25
4235	Screw for Kingston Coil .....	37.50			
4379	Switch Plug for K-W Coil .....	8.75			
4431	Carburetor Priming Rod .....	6.25			

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